



**Greenwich Public Schools**

# Technology Plan 2012-15

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*Empowering Learners Through Technology*

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**Submitted to Board of Education, May 2, 2012.**

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## Greenwich Public Schools

EDUCATIONAL TECHNOLOGY PLAN – July 1, 2012 - June 30, 2015

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Signature of Superintendent or Director:		Date:
Date Submitted to Board of Education:	May 2, 2012	
Date Approved by Board of Education:		

For RESC/SDE Use Only:

RESC Regional Reviewer:		Date:
RESC Recommendation for Approval:	Yes / No / Conditional	Date:
CSDE Authorization:		Date:

## Preparation Check-Off Page

The submitted plan has the following:

- ✓ Cover Page
- ✓ Educational Technology Plan Preparation Check-Off Page
- ✓ LEA Federal Grant Program Compliance Form
- ✓ LEA Profile
- ✓ Educational Technology Planning Committee
- ✓ Vision Statement
- ✓ Needs Assessment
- ✓ Goal 1
- ✓ Goal 2
- ✓ Goal 3
- ✓ Goal 4
- ✓ Goal 5
- ✓ Children's Internet Protection Act (CIPA) Certification
- ✓ Optional Reporting\*

*\* The LEA is encouraged to complete a technology funding source list and budget to submit with the technology plan.*

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Signature of Authorized LEA Agent

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Date

## Local Education Agency (LEA) Federal Grant Program Compliance Form

Greenwich Public Schools  
Local Education Agency Submitting this Plan

*Developing a comprehensive educational technology plan based on the educational goals of the school system will ensure that the most appropriate technologies are effectively infused into your instructional and/or administrative programs. Thorough planning also ensures that all parties have equitable access and achieve the greatest benefit from routine use of educational technology. The comprehensive educational technology plan should demonstrate clear targets for technology use, spell out desired goals for learners, create visions for future directions, build "buy-in" from stakeholders and demonstrate to those who might provide funding that a district or charter holder is ready to act.*

*School districts, consortia or charter schools (LEAs), who apply for technology funding through any federal grant program, are required to have developed a comprehensive, three-year plan, which outlines how the agency intends to utilize and integrate educational technology.*

The applying agency (check all that apply)

☒ Is compliant with the provisions of the Children's Internet Protection Act (CIPA) [20 U.S.C. § 6777].

☐ Will be CIPA compliant by this date. \_\_\_\_\_

☒ Has applied for E-Rate funding.

The LEA's comprehensive educational technology plan must be approved by the local board of education.

Date the plan was approved: \_\_\_\_\_

**OR**

Date the plan is to be submitted for board approval: May 2 , 2012

**Certified by:**

\_\_\_\_\_  
Signature of Superintendent or Director

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Superintendent or Director

## LEA Profile

LEA                      Greenwich Public Schools

NAME: \_\_\_\_\_

This information should provide a “snapshot” of your district and help planners and reviewers to understand areas of need. This information will also assist the CSDE to establish priorities in the provision of resources to districts. The CSDE is particularly interested in the capability that each LEA has to access resources that will be placed onto the Connecticut Education Network (CEN). The new questions about technological literacy and professional development are asked as a result of additional federal reporting requirements.

### ***Educational Technology Literacy***

Questions	Your District's Numbers
During the 2010-11 school year, how many Grade 8 students were evaluated for technological literacy based on your district's standards?	621
How many of those students were considered technologically literate based on that evaluation?	390
How many hours of technology-related professional development (PD) were offered to certified educators in 2010-11, including workshop hours that are offered to all of your educators (both teachers and administrators)? These sessions may be online and may include full-day or partial-day sessions provided by RESC personnel. Although both mentoring and coaching are considered very effective methods of offering PD, do not include any of those hours.	445 hours
How many hours of technology-related professional development were offered to administrators in 2010-11? Count only those PD hours offered specifically for administrators.	30 hours
In Grades K-8 what fraction of your certified staff does your district consider technologically literate? The fraction's denominator should reflect the actual number of professional K-8 staff. For example, if out of 120 certified staff, 110 are considered technologically literate, the answer would be 110/120.	801/900
In Grades 9-12, what fraction of your certified staff does your district consider technologically literate? The fraction's denominator should reflect the actual number of professional 9-12 staff.	267/300

### ***Policies***

How often are your Acceptable Use Policy (AUP) and other technology-related policies updated (Please check one below)?

☒ Every year   ☐ Every other year   ☐ At least every three years   ☐ Other: \_\_\_\_\_

Insert a link to your district's AUP below if it is stored on the Web:

[http://gsdpublicdash.com/Procedures%5CE040\\_4\\_AcceptableUse\\_InternetSafetyRev\\_0610.pdf](http://gsdpublicdash.com/Procedures%5CE040_4_AcceptableUse_InternetSafetyRev_0610.pdf)

**Online Assessments**

When filling out the table below, please consider the following conditions:

- The number and percentage of students at each grade level that can have high-speed Internet access at the same time.
- The students are grouped in clusters of no more than 30 and no less than 10 students.
- The students remain in their own school.

The maximum number of Grade 4 students who could be accommodated under the above conditions.	550
The percentage of Grade 4 students who could be accommodated under the above conditions (number accommodated/total number of Grade 4 students).	70%
The maximum number of Grade 6 students who could be accommodated under the above conditions.	300
The percentage of Grade 6 students who could be accommodated under the above conditions (number accommodated/total number of Grade 6 students).	50%
The maximum number of Grade 8 students who could be accommodated under these conditions.	300
The percentage of Grade 8 students who could be accommodated under the above conditions (number accommodated/total number of Grade 8 students).	48%
The maximum number of Grade 10 students who could be accommodated under the above conditions.	310
The percentage of Grade 10 students who could be accommodated under the above conditions (number accommodated/total number of Grade 10 students).	46%

## District Technology Planning/Advisory Committee

Member	Title	Constituency
<b>Fran Kompar</b>	Coordinator, Media & Technology	District
<b>Jan Gunnip</b>	Director, Educational Technology	District
<b>Kim Eves</b>	Director, Communications	District
<b>Robert Lichtenfield</b>	Director, Human Resources	District
<b>Ben Branyan</b>	Managing Director of Operations	District
<b>Rick Piotrowski</b>	Assistant Headmaster	Greenwich High School
<b>Brigid Barry</b>	House Administrator	Greenwich High School
<b>Sheila Civalé</b>	Program Coordinator, Science	District - Science
<b>Jennifer Mitchell</b>	Program Coordinator, Language Arts	District – Language Arts
<b>Ralph Mayo</b>	Principal	Eastern Middle School
<b>Kim Beck</b>	Principal	Cos Cob School
<b>Patricia Raneri</b>	Principal	Old Greenwich School
<b>Janean Smith</b>	Assistant Principal	Glenville School
<b>Karen Ball</b>	Media Specialist	Middle School
<b>Jennifer Lau</b>	Media Specialist	Middle School
<b>Elizabeth Cotter</b>	Instructional Coach, Science	District - Science
<b>Brenda Brush</b>	Instructional Coach, Math	District - Math
<b>Julisa Rincon-Tomizawa</b>	Instructional Coach, SPED	SPED
<b>Aimee Farnum</b>	Teacher	Greenwich High School
<b>Linda Swenson</b>	Media Technical Assistant	Elementary School
<b>Laura Jean Waters</b>	Media Specialist	Greenwich High School
<b>Fionnuala Browning</b>	Media Specialist	Elementary School
<b>Jeannine Madoff</b>	Media Specialist	Elementary School
<b>Alexandra Stevens</b>	Media Specialist	Greenwich High School
<b>Patti Jomo</b>	PTA Tech. Committee Chair	PTA
<b>Lisa Dempsey</b>	Teacher / Technology Facilitator	Greenwich High School
<b>Leslie Perry</b>	Parent / Community Member	Community / PTA
<b>GHS Students</b>	GHS	Student



### ***Feedback from other Stakeholders***

Stakeholders	Scheduled Meeting	Constituency
<b>Cabinet /Sr. Leadership</b>	Various	Sr. Leadership
<b>Principal's/Coordinator's Meeting</b>	February 27, 2012	Building and District Leadership
<b>PTA Council, Committees (parents)</b>	Various	District
<b>Board of Education – Public Session</b>	May 2, 2012	Board of Education, Public

### **Technology Committee's Role**

The Greenwich Public Schools Technology Advisory Committee wrote the 2012-15 Technology Plan based on a comprehensive evaluation that included a review of research on technology and student learning, student assessment data, needs assessment surveys, teacher and administrator participation data in technology training, walk-through observations and feedback meetings with constituency groups. This Technology Plan was written with one overarching focus: the District's transition to Common Core State Standards (CCSS) and the Smarter Balanced Assessment Consortium (SBAC), which is scheduled for implementation in 2014-15. In reviewing the CCSS – specifically the College and Career-Ready Anchor Standards – it is clear that one of the important instructional shifts is the requirement and urgent need for students to be information, media and technology-literate. In addition, as the new assessment will be administered online using a balance of computer adaptive and performance tasks – infrastructure, access to computers, technical support and a professional learning program addressing teacher technology proficiency would be required as part of the Plan.

Consideration was given to emerging trends in technology, evidence from ongoing pilots in our schools using mobile technology, visits to other Districts, and ongoing efforts to frame a vision of our graduate as being prepared for college and career in our 21<sup>st</sup> century world. The process has been conducted through a Wiki (<http://techplan12-15.greenwich.wikispaces.net/>) and Google Docs. Members of the Technology Committee formed sub-committees, each sub-committee focused on one of the five goals in the Technology Plan. In addition to regular Technology Advisory Committee work sessions, sub-committees met to finalize their areas, vendors were invited in to discuss needs such as mobile device management (MDM), BYOD (Bring Your Own Device), assessments on technology proficiency for students and staff, and eBook and eTextbook platforms.

The Advisory Committee will meet quarterly during each year of the Plan to evaluate our progress and changing conditions. In addition, sub-committee work to evaluate management tools and to fine-tune policies, procedures and ways to incorporate new technologies will also take place.

Finally, this plan represents a template for future goals in technology. Our action plans include items that will inform our next steps. New data, the constant evolution of technology, fiscal constraints and other unforeseen events will result in refocusing and redirection of the Plan.



## **Greenwich Public Schools' Mission**

It is the Mission of the Greenwich Public Schools:

- To educate all students to the highest levels of academic achievement;
- To enable them to reach and expand their potential; and
- To prepare them to become productive, responsible, ethical, creative and compassionate members of society.

## **Vision of the Graduate**

The Greenwich Public Schools are committed to preparing students to function effectively in an interdependent global community. Therefore, in addition to acquiring a core body of knowledge\*, all students will develop their individual capacities to:

- Pose and pursue substantive questions
- Critically interpret, evaluate, and synthesize information
- Explore, define, and solve complex problems
- Communicate effectively for a given purpose
- Advocate for ideas, causes, and actions
- Generate innovative, creative ideas and products
- Collaborate with others to produce a unified work and/or heightened understanding
- Contribute to community through dialogue, service, and/or leadership
- Conduct themselves in an ethical and responsible manner
- Recognize and respect other cultural contexts and points of view
- Pursue their unique interests, passions and curiosities
- Respond to failures and successes with reflection and resilience
- Be responsible for their own mental and physical health

\*The core body of knowledge is established in local curricular documents, which reflect national and state standards as well as workplace expectations.

## Introduction

The Greenwich Public Schools Technology Plan 2012-15 was developed in an effort to support the vision, mission and strategic directions already in place, and to continue progress made in specific goals that will ensure students are competitive and fluent in 21st century skills and knowledge. At the center of the strategic directions for Greenwich Public Schools is student learning. In order to prepare our students in an ever-changing world, we must provide the knowledge and skills for their success. It is our belief that students must not only meet the standard for excellence in education and become responsible citizens in our society with the help of technology but must be capable users of technology to succeed in our complex, global society. The use of technology is a critical 21st century skill and an integral part of a student learning and working in today's society. Students utilizing technology to exchange and collaborate on projects, access, evaluate, and master digital resources will have the means to be productive citizens in our society.

## Vision for Educational Technology

**Essential Question:** How can we prepare students to achieve the knowledge, skills, and capacities to be active, creative, and ethical participants in our globally interdependent 21st century society?

Technology has fueled a fundamental change that has led to the development of an interdependent, global society. This transformation necessitates a shift in instructional approaches in which technology is seamlessly integrated. Today's students require an engaging and empowering learning experience, resulting from a rich curriculum that allows for interdisciplinary, personalized, inquiry-based learning in which the teacher is facilitator. Students will be expected to collaborate with others both locally and globally through digital media, seek, evaluate, and synthesize information from a variety of online resources, solve problems using electronic tools, and express their ideas through multiple modes of communication. Greenwich Public Schools will provide access to and instruction on technology and digital resources, allowing for students to develop the necessary skills, knowledge and capacities to ensure that they are successful in both college and career.

## Mission for Educational Technology

Students graduating from Greenwich Public Schools must demonstrate fluency and adaptability with technology. It is our mission to move from a model where technology is treated as an additional aspect of the everyday classroom to a seamlessly integrated, essential tool. This transformation in the way we approach educating students will ensure their preparedness for life beyond K-12 education in the always "on," and always "connected" world. Student learning will be guided by well-developed curriculum and modern instructional models infused with technology. To support our vision of engaged and empowered learners, we must work from the bottom up to ensure that our schools can support student needs. We must:

- Align current curriculum to Common Core and address the need for information, media and technology literacy skills and provide access to mobile devices for access to digital content, such as eBooks, digital resources, eTextbooks, and instructional apps.
- Administer formative and summative SBAC assessments, aligned to Common Core Standards, and gather actionable data to improve student learning.
- Use a systematic method to provide professional development for teachers and staff to keep them up to date in the ever-changing world of technology.

- Establish a solid infrastructure, including wireless access for all schools, access to computers for technology projects and assessment.
- Develop necessary policies and procedures and provide appropriate systems to maximize productivity and efficiency.

Through these goals, we ensure that our students will have the learning experiences that are necessary to adequately prepare them to achieve at their highest levels and reach their full potential. GPS students will not only know how to use technology, but will understand how to manipulate and apply technology to support their quest for knowledge and their individual capacities and skills, to ensure their preparedness for entering a global society.

### Core Beliefs for Educational Technology

Our core beliefs for educational technology are based on research studies and observations recounted in the literature. Case studies, longitudinal research studies and day-to-day anecdotal evidence point to confirmation that effective use of proven instructional strategies with technology improves student learning by reaching diverse learning modalities, supporting differentiation, and by definition, are requiring authentic, project-based and inquiry learning.

1. Use of technology and information is an essential literacy skill, akin to reading, writing and arithmetic.
2. True knowledge of technology must be learned through constant access, and must be fully embedded into all content areas.
3. Despite popular belief, even digitally native students need to be instructed in technology and information skills to ensure that they are prepared to enter the world as adults.
4. Only highly qualified teachers, with a deep understanding of technology, both devices and systems, can adequately prepare students to use technology in a meaningful, purposeful and safe way.
5. Adequate staff and infrastructure are critical to supporting the fully integrated model that will best prepare our students for the highly competitive world beyond high school.
6. Technology supports broader collaboration opportunities both locally and globally.
7. 21st century communication requires fluency in the use of technology.



## Needs Assessment

The following strategies and data were used to evaluate our progress to date in the area of the use of technology:

- Classroom Technology Survey – A survey was administered to all certified staff – with over 40% response rate.
- Administrator / Non-Certified Survey – A survey was administered for all school administrators and non-certified staff (professional assistants, administrative assistants). –with over 40% response rate.
- Student Assessments – the District utilizes assessments to evaluate Information and Technology Literacy (ICT) skills through national standards-based instruments for Grades 5, 8 and 10.
- Literature Review – An examination of trends, case studies and research on effectiveness of technology in education.
- Observations – The District regularly conducts walk-throughs and coaching which result in anecdotal and observed use of technology in the classroom.
- Comprehensive review of the previous Technology Plan 2009-12 to continue much of the successful work begun during the last three years.
- Site Visits – Visits to neighboring districts that are pioneering mobile learning plans and/or BYOD plans.
- Staffing Survey to Neighboring Districts – With staffing models varying from school district to school district it is often unreliable to depend on School Strategic Profiles as staff who support technology may be found in a variety of departments. A survey was sent to Technology Coordinators to list types of positions and responsibilities for IT support, teaching students information, media and technology skills, and supporting teachers with training and integration of technology in their classroom.

## Findings from Survey Results: Curriculum Integration

The Common Core State Standards (CCSS) – specifically the College and Career Readiness Anchor Standards – explicitly have blended media, information and technology skills throughout. This is one of the instructional shifts evident in the CCSS. Excerpt from Anchor Standards:

***Students use technology and digital media strategically and capably.***

*Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and mediums and can select and use those best suited to their communication goals.*

When asked about technology use with student-driven projects in our survey– as illustrated in Common Core State Standards – a majority of teachers responded that they provided opportunities for students to engage in these types of projects infrequently (Never / Once a Semester or Once a Month) as follows:

Student-Driven Project	Never or Once a Semester	Once a Month	CCSS Alignment
Use technology tools & resources to collaborate on digital projects	58%	16%	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others
Use technology to conduct research	55%	18%	Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
Use technology to communicate or express an idea	50%	16%	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others
Use technology to make a decision or problem-solve	56%	15%	Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
Use technology to administer an online assessment	63%	17%	SBAC

## Curriculum Integration

Indicator	Progress/Strengths	Next Steps
Develop K-12 articulation for media/technology skills and processes aligned to state and national standards	<p>Completed a formal curriculum review that aligned the curriculum to state and national standards while addressing gaps based on research-based practices.</p> <p>Units of study – transdisciplinary units – have been written and will be implemented fully in the next two years.</p>	<p>Align curriculum with Common Core Standards through curriculum alignment, digital content, classroom instructional models and a strategic plan to provide access to mobile devices.</p> <p>Focus on using technology for research, communication, collaboration, and critical thinking.</p>
Develop, implement and refine assessments to evaluate skills.	<p>Implemented exit assessments for grades 5 and 8 based on national standards, transitioned from the Technology Literacy Assessment to the 21st Century Skills Assessment (aligned to ISTE Standards)</p> <p>Implemented formative assessments embedded within assured experiences.</p> <p>Developed benchmarks aligned to a standards-based report card in Grades 3-5.</p>	<p>Implement assessment through assured experiences in place – or to be developed – to measure progress of students in grades 9-12.</p> <p>Continue development of benchmark assessments to serve as part of teacher toolbox.</p>
Develop and implement two transdisciplinary, assured experience based on UBD framework for each grade-level in K-5 with corresponding	<p>Implemented units based on science and social studies content – formal implementation of second unit will be in 2012-13.</p>	<p>Develop units in all grades and refine established units to reflect changing and innovative practices.</p>



performance tasks.		
Infuse high-quality, digital resources and tools into the classroom.	<p>Teachers have been introduced to the following high-quality digital tools to support our vision of the 21st Century Classroom:</p> <ul style="list-style-type: none"> <li>• SmartBoard, A/V Systems (classrooms in grades 3-12 fully outfitted)</li> <li>• Streaming Video Library</li> <li>• Online library catalog system</li> <li>• Consistent online periodicals, databases, encyclopedias and a home-grown, in-house virtual library of curriculum resources.</li> </ul>	<p>Professional Learning (provide ongoing opportunities for teacher training on resources)</p> <p>Communication vehicle: blog or other to inform leadership, teachers and parents of resources.</p> <p>Continue development and monitor usage of digital tools and resources.</p>
Explore use and infuse open source, web 2.0 digital and collaborative technologies into classrooms.	<p>The following online tools that support Research/Information Fluency, Communication and Innovation, Technology Operations and Digital Citizenship have been introduced:</p> <ul style="list-style-type: none"> <li>• Brain Pop, Voicethread, Noodletools, Turn-it-in, Learning.com</li> <li>• Google Apps including Gmail for students</li> </ul>	Continue development and monitor usage of digital tools and resources.

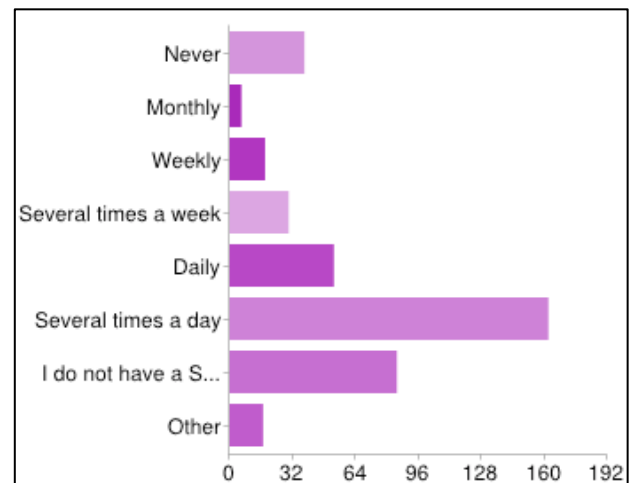
### Findings from Survey Results: Professional Learning

Comfort level using the following productivity technologies:

	Not comfortable/Need a lot of assistance	Need little assistance	Independent user/Expert
Word Processing (MS Word)	2%	2%	96%
Slideshow (Powerpoint)	7%	25%	68%
Spreadsheets (Excel)	17%	31%	51%
Podcasting (Voicethread, Photostory, etc)	56%	24%	5%
Web 2.0 multimedia (Prezi, Animoto, etc)	62%	18%	20%
Video Editing (iMovie, Moviemaker)	62%	19%	19%
Web Publishing (Finalsite, Google Sites, Wikispaces)	47%	24%	30%
Blogging	52%	22%	26%
Smartboard Notebook Software	26%	21%	52%
Photo Editing Software	31%	26%	32%
GoogleDocs	27%	32%	42%
Google Forms	32%	36%	31%

Smartboard Use – How often do you use the Smartboard?

<b>Never</b>	<b>10%</b>
<b>Monthly</b>	<b>2%</b>
<b>Weekly</b>	<b>5%</b>
<b>Several Times a Week</b>	<b>8%</b>
<b>Every day</b>	<b>14%</b>
<b>Several times a day</b>	<b>42%</b>
<b>Do not have one</b>	<b>22%</b>



When describing their proficiency on a Smartboard, here is the breakdown:

<b>I have one, but do not use it</b>	<b>0%</b>
<b>Beginner - I use my SMART Board as a projection device</b>	<b>7%</b>
<b>Intermediate - I use the SMART Board tools (ex. pens, highlighter, eraser) with MS Office, PDF documents and web browsers</b>	<b>30%</b>
<b>Proficient - I create interactive lessons utilizing SMART Notebook Software, Smart Exchange and the lesson activity toolkit</b>	<b>29%</b>
<b>Advanced - I use advanced tools including screencasting, video and SMART Response Clickers</b>	<b>5%</b>

Here is the breakdown of what teachers find to be obstacles in their use of technology tools in the classroom:

Obstacle	No Obstacle	Obstacle
<b>Time to practice and implement the new technology tools I learn in PD.</b>	8%	91%
<b>Time to plan</b>	3%	95%
<b>Other priorities</b>	11%	88%
<b>Lack of PD opportunities</b>	26%	71%
<b>Lack of technical support</b>	43%	64%
<b>Lack of training/coaching support</b>	30%	67%

Top requests for professional learning training sessions on specific technologies:

1. Google Docs (45%)
2. Smartboard Software/Lessons (45%)
3. Multimedia/Video editing (41%)

### Preferred Delivery of Professional Learning:

Teachers preferred technology training that focused on using the skills within the context of their instructional practices:	Percentage
<b>Creating technology-rich lessons and units of study</b>	66%
<b>Mobile Devices (How to use in the classroom )</b>	54%
<b>Use of technology effectively in the classroom including instructional strategies for integrating technology</b>	50%

Preference for delivery of training:	
<b>District/school half day workshops or a full day</b>	59%
<b>Series C - Three 1.5 hour workshops after school</b>	41%
<b>3-hour early release</b>	58%
<b>Instructional coach/small group instruction</b>	51%
<b>Online tutorials</b>	18%
<b>Attending workshops taught by third parties</b>	10%
<b>Outside of the school day</b>	3%

### Professional Learning

Indicator	Progress/Strengths	Next Steps/Gaps
Create and implement professional learning initiatives for Administrators to address Connecticut Administrator Technology Standards.	Provided ongoing workshop series on 21st Century Skills for Administrators through the Administrative Professional Learning program through Leadership Series.	See Professional Learning Plan.
Create and implement professional learning initiatives for teachers to address Connecticut Teacher Technology Standards.	Professional Learning workshops offered, tracked and evaluated through the EZ-Traxx Professional Development system.  Training needs assessments conducted at district, school, and program level.  Workshops offered on productivity suite tools, emerging technologies, major initiatives, i.e., SmartBoard training, to implement new systems such as the Web Content Management and Teacher/Student Portal, and on instructional strategies, Google Apps, Discovery Learning.	See Professional Learning Plan.
Ensure that all media specialists serve as the leaders in technology and 21st Century information literacy skills within their school buildings	Program Meetings and other opportunities – provided means for introducing resources, instructional strategies and new systems to Library Media Specialists.  Implemented train-the-trainer programs for launch of new systems.	Train LMS in the new Media Specialist Evaluation Plan to include collaborative instruction.

## ***Findings from Survey Results: Access to Technology and Support***

### **Access to Technology and Support**

<b>Technology and Support Priority</b>	<b>Moderate/High Need</b>
<b>Reliable Wi-fi access throughout the building</b>	71%
<b>Additional access to desktop/laptops</b>	85%
<b>Access to mobile devices</b>	75%
<b>Additional technical support</b>	83%
<b>Provide online (cloud) storage</b>	55%

## ***Equitable Use of Technology***

### **Tech Replacement Rationale**

In our fast-changing, technology-rich society, Greenwich Public Schools seeks to ensure that all students are prepared for their future. One of the critical goals of the 2012-2015 District Technology Plan is to provide equitable access to technology for all students. The technology that the District provides includes high-quality digital resources, websites for communication, curriculum-specific software resources and, a high-level of student access to computers that will increase over the life of the plan. In order to meet this goal, the District works with schools to maintain a standard classroom/school model for number of computers per student based on grade-level and research-based instructional practices and needs.

### **Elementary Schools:**

Although schools deploy computers per specific curriculum and student needs, typically, elementary schools currently have four computers per classroom, a full media computer lab as well as various administrative machines.

It is our expectation that the number of computers per student will increase over the life of this plan. In the elementary schools, in addition to a wired Media Center Lab, there will be 3 laptop labs available (on average) for online assessments as well as Smartboards in K-5 classrooms as well as identified specialists' classrooms.

### **Middle Schools:**

Middle schools typically deploy at least one computer per classroom and additional classroom computers per curriculum need in such classrooms as Language Arts and Tech Ed. Additionally, middle schools have two media computer labs and two mobile laptop carts. The difference in their ratio compared to other grade levels is accounted for the fact that instructional practices are "in the middle" between a lab model (utilized at the high school) and a classroom model (utilized at elementary schools).

It is our expectation that the number of computers per student will increase over the life of this plan. In the middle schools, in addition to two wired Media Center Labs and three mobile labs, there will be

additional mobile labs sufficient to complete SBAC assessment requirements as well as Smartboards for academic classrooms and identified specialists' classrooms. In addition, mobile devices will begin increasing for eTexts, student projects and note taking.

### High School:

Greenwich High School predominantly utilizes a lab model for whole class instruction. GHS has labs in all five (5) houses, Science, and the Media Center. In addition, it also houses program specific labs for Art/Music, Tech Ed, TV Studio, and World Languages. Students have access to computers in their Learning Centers and Media Center and teachers have dedicated computers in Learning Centers, classrooms, and office spaces. SmartBoards have been added to all academic classrooms. During the life of this plan, additional SmartBoards will be added to other subject areas such as music, art, phys. ed. classrooms. In addition, we expect to begin providing students with tablets/devices for eTextbooks, note taking and projects.

### Technology Availability to Staff

	Please include information about the type and availability of staff access both on and off campus.
Administrators	100% On campus via high speed MAN 100% Off campus – Student Information System, email, Portal, and Data Dashboard 100% Off campus availability to Google Docs Off campus connectivity to networked data is provided by request.
Teachers (preschool)	100% On campus via high speed MAN 100% Off campus – Student Information System and email Off campus connectivity to networked data is not provided by the district. 100% Off campus availability to Google Docs
Teachers	100% On campus via high speed MAN 100% Off campus – Student Information System, email, Portal, and Data Dashboard 100% Off campus availability to Google Docs Off campus connectivity to networked data is not provided by the district.
Noncertified staff	100% On campus via high speed MAN 100% Off campus – Student Information System and email 100% Off campus availability to Google Docs Off campus connectivity to networked data is not provided by the district.

### Technology availability to Students

	Please include information about availability in classrooms, the library-media center and all other areas where students have access. Mention the extent of supervised access before and after school.
Students (preschool)	1 Teacher Workstation 2 Classroom Workstations Schedule Lab (25 computers) 100% Compliance with District ratio
Students (elementary)	1 Teacher Workstation 3-4 Classroom Workstations 1 Scheduled Lab (25 Computers) 1 Scheduled Mobile Lab (25 Computers) 100% Compliance with District ratio

Students (middle school)	1 Teacher Workstation 4-8 Classroom Workstations 2 Scheduled Labs (25 computers per lab) 2-3 Mobile Labs (25 computers per lab) 100% Compliance with District ratio
Students (high school)	1 Teacher Workstation 28 Media Center Student Workstations including supervised access before/after hrs. 9 Schedule Labs (25 computers per lab) 1 TV Studio Lab (18 computers) 1 Business classroom (25 computers) 2 Art/Music Labs (25 computers per lab) 4 Mobile labs (3 – science; 1 – Family and Consumer Science) 100% Compliance with District ratio
Students (with disabilities)	100% compliance with IEP recommendations

## ***Infrastructure and Telecommunication***

### **Overview**

Greenwich Public Schools routinely maintains its data communications network through the Capital Improvement Plan. The technology provided must support current and new methods to increase productivity and efficiency both in the instructional programs and administrative computing. Utilizing technology to enhance the way information is communicated and accessed provides an optimum learning experience for students and more efficient tools and resources for faculty, staff and administrators. Part of this challenge is providing adequate staffing and financial resources to deliver and maintain the needed communications networks and technical support.

The District needs to provide technology resources to support existing and new academic programs such as online learning, Distance Education, etc. These services require a robust, high speed, wide bandwidth, and communication network infrastructure. The network must have the capacity to provide sufficient bandwidth for present and future requirements, operate on a 24/7 schedule and provide required power back-up and technical support services.

### **Technology**

Servers are sized as to number of processors and speed, memory, and storage requirements based on specific function. The district server farm includes local print and file servers at each building with centrally located servers and appliances for electronic mail, content filter, web services, caching and proxy services, virus protection, spam filtering, domain authentication, terminal services, mission critical business applications, library management, and student information systems.

### **Software**

The Microsoft Office Suite comprises the core set of productivity software provided for each personal computer. The District subscribes to the Microsoft School Agreement for its licensing of core Microsoft based products.

To the extent practicable, software products are centrally based and delivered to personal computers via application servers. Some curriculum software must be fully or partially installed locally. Notebook computers must have all required software products fully installed in order to ensure their availability outside the District network.

## **Network Infrastructure**

### **Internet/broadband**

The Town of Greenwich shares a 10/100 Mbps connection to the Internet. The school district is connected by Gigabit fiber links between schools and the main district office. This service provides the Internet connectivity to all district buildings. This service is filtered in compliance with CIPA and E-Rate requirements.

### **Planning**

All planned new construction or upgrading for data communications will be Cat 6 station and 1000Base-LX (1000 Mbps Gigabit) backbone wiring.

In planning for the future needs of the District the following must be considered:

- The increase in personal computing to support personalized learning through thoughtful investments in technology.
- The emergence of personal computing devices that require wireless connectivity and increased bandwidth.
- High availability of network performance to ensure that users can access the network whenever necessary.
- Necessary support staff to provide technical support as well as training.

## **Telecommunications**

### **Strategy**

Increase teacher/parent communications by providing voice mailbox for all teachers as well as administrators, principals, assistant principals, and guidance counselors. (See, "Standard Allocation of Telephony Resources.")

During the time period covered by this plan, the District will be in the process of adding Hamilton Avenue and Glenville schools, currently under construction, to the VoIP solution. Both schools will have new systems once their buildings are completed.

Voice communications is carried over separate fiber optic pairs (emulating traditional copper T-1 connections) on the District network connecting PBX systems at remote building to a central PBX at the District central office. The central PBX is connected to the public switched telephone network via commercial carrier trunks for local and long distance telephone service. The entire District voice communications system is being upgraded to Mitel employing servers and gateways, centralizing voice mail, enabling 911 location identification, providing for voice over IP (VoIP) connectivity, and introducing voice/data convergence by utilizing the WAN Ethernet transport for connectivity.

## Standard Allocation of Telephony Resources

There will be centralized voice mail, housed at Greenwich High School. All (fulltime) users, including teachers, will have a mailbox. All mailboxes have similar features including, personalized message, retrieval and playback features, etc. Where possible, mailbox numbers will match dedicated extensions; however, this is not possible in all instances for all users.

Telephones will be available in every classroom. Extensions will be 4-digits for all locations added to the system. The numbering plan has limited logic. The first two numbers indicated the location and the last two numbers indicate the actual extension. All principal's extensions will be XX01, nurses XX11, Media Centers XX33, etc. No main school numbers have changed. Direct Inward Dialing (DID) numbers are assigned to key personnel in each school. As a standard policy, DID's are given to Principals, Assistant Principals, Main Office staff, Nurses, Custodians, Media Centers, Psychologists, Guidance Counselors, Social Workers, and Kitchen Offices. Other users will be assigned DID's on a case-by-case basis. Employees get a direct number, and incoming calls can be direct-dialed to each employee or, where indicated, routed through the switchboard (GHS and District Office).

Designated personnel will be provided with wireless telephones that include the capability to view email and calendars. In addition, these phones will have "push-to-talk" capabilities to facilitate emergency communications.

## E-Rate Funding

All eligible products and services under the E-rate program fall into one of three categories: "Telecommunications," "Internet Access," and "Internal Connections." Both the "Telecommunications" and "Internet Access" categories are considered Priority One services and are fully funded every year. Greenwich Public Schools receives funds for Web Hosting and Telecommunications. The network infrastructure funding is handled through the Town of Greenwich.

## Administrative Needs

### Certified/Non-certified use of Technology

Type	Strategy	Availability	Needs
Accessing Data for Decision-Making	Portal, Data Dashboard  Expand the use of RTI Studio to include all academic areas, encompass all Tier 1, 2 & 3 assessment data to provide a single area for staff to review	All certified staff have access (24/7) to interactive reports, cumulative high-stakes test results, ISIP's, and the ability to export these data to Excel and/or Word in order to perform additional data manipulation  Secondary certified staff have access (24/7) via the teacher portal to post their class syllabus, homework assignments, test schedules, and view their class calendars  Administrators have access (24/7) to district-wide interactive reports,	Increase usefulness of dashboard to non-certified administrators  Increase usefulness to non-certified staff



		cumulative high-stakes tests results, ISIPs, and the ability to export these data to Excel and/or Word in order to perform additional data manipulation.	
Student Information Management System (SIMS)	X2 Aspen  <b>Professional Development</b> 2012 - 2015 ongoing training	Aspen is available 24/7 to all certified and non-certified staff.	Include IEP in Aspen and eventual export to RTI Studio
Communication Tools	Content Management System	Business as usual	
	District Email	All Certified staff have 24/7 access to email. Non-certified staff are assigned accounts as required by their administrators and position	
	Home Communications	Parent Portal is provided to all elementary and secondary schools. (2012-2015)	
	Telecommunications	Business as usual	
RTI	Tier 1 – Baseline data  Tier 2 – Strategies  Tier 3 – Strategies  <b>Professional Development</b>  2012-2015 ongoing for current and new staff	2012-2013: Add Math K-8 assessment data via data import. Add Science Grade 9-11 via data import. 2013-2014: Add science assessment data  Paper only  Paper only  2012 - 2015 Data and Evaluation teams work with programmers act as trainers for teachers and other evaluators	Add to Data Dashboard so that teachers can enter data via class lists, online, tied to ISIP manager, printable in PDF if needed. 9/1/12 Benchmark assessments for Language Arts and Mathematics, Embedded Tasks for Science 9/1/12 – 6/30/13 Tier 2 Language Arts and Mathematics 9/1/10 Benchmark assessments Science 9/1/14 Tier 2 Science 9/1/15 Tier 3 Language Arts, Mathematics, Science



## Rationale

Each day, students from across the Greenwich Public Schools tap into resources and a wide range of technologies to enhance learning as well as add real world relevancy and context to their studies. As they work through a math problem, they may use an animation to problem-solve, work collaboratively using Google Apps with a group of peers on a science paper on the BP spill, examine primary source documents relating to the Civil War using the National Archives, or use Skype to communicate with an author. The professional literature terms this as empowering experiences and engaging learning environments. In about 25% of our classrooms, these activities are commonplace. (See Classroom Teacher survey results in appendices). According to teachers in our schools, their vision is to expand the use of technology, use more digital content and enhance the learning experience by teaching 21<sup>st</sup> century skills. When asked to describe their vision of a 21<sup>st</sup> century classroom, teachers described a classroom in which each of their students has a device (a tablet or iPad), online resources, and as-needed and when needed access to the Internet. For many of the teachers surveyed, though, there are many obstacles to reaching their vision. Limited access to technologies, unreliable or nonexistent wireless and insufficient time and support to plan technology-rich lessons were cited by teachers as the obstacles to using technology and digital resources in their classroom instruction. The goal of our next three-year technology plan is to expand the “digital learning environment” to all learners – and to all classrooms and to meet the challenges of the barriers to this goal.

Outside of school, students make use of technology readily and easily for learning and entertainment. They adapt to the quickly changing environment in which they live and in which technology permeates. The world of our students has changed- and continues changing exponentially and, as natives, they seem to be able to adapt naturally. In a recent survey by Project Tomorrow – Speak Up – over 300,000 students were surveyed and the findings showed that in just five years 6<sup>th</sup> graders with an MP3 player has tripled, 25% are already using eTextbooks regularly to access classroom materials and about 50% (or a 125% increase over the last five years) update their social networking site each day (keep in mind that 6<sup>th</sup> graders are not legally old enough to even register for most social networking site). The Speak Up Research Project has seen a clear trend in the data since administering it in 2003. As parents, community members and school personnel continue arguing about the value of technology, students are forging their own vision of technology in their lives and executing outside of their school. According to the results of the Speak Up survey:

*As parents, community members and school personnel continue arguing about the value of technology, students are forging their own vision of technology in their lives...*

*“...Our nation’s students already have a plan in mind for how to effectively leverage technology to drive student achievement and ensure that all students are well-prepared for their future, they are, in fact, with or without the rest of us executing their own vision for a 21<sup>st</sup> century education”. (Speak Up, 2010).*

That data shows that students want to be able to interact and learn using personalized tools and networks, and to use the learning tools they need when they need them and where they need them. They prefer immersion in digital media and understand how they can maximize the tools for productivity and learning. The change that students envision goes beyond the individual components often part of typical technology plans but calls for a change in teaching and learning. Students’ vision of learning and technology speaks to transcending classroom walls, resource constraints and community assets. Students see technology, and specifically the Internet, as a giant learning sandbox which can be explored at their own pace and on their own time. The three essential elements that are part of the

student vision for education include innovative use of emerging technologies including mobile devices, Web 2.0 tools and digital content. The new approach is to incorporate the tools and applications as a natural extension of the way they are living outside of the classroom. In effect, they don't think they should "power down" to go to school.

To meet the needs of our students, today's classrooms must be more flexible, relevant and provide differentiated instruction through the availability of a range of web-enabled devices and online resources. According to a recent publication from the U.S. Federal Communications Commission (FCC), *A Digital Textbook Collaborative*, the increase in digital content provides a rich experience with opportunities for interaction with materials, resources, and experts beyond the classroom. The resources that are available through access to the Web are critical to students – especially as we move toward the new Common Core Standards (CCSS) and the Smarter Balanced Assessment (scheduled to be administered entirely online and to replace CMTs and CAPT in 2014-15). The Common Core State Standards Initiative has identified information, media and technology skills are part of the key literacies for students in the 21<sup>st</sup> century. Media and Technology skills are blended throughout the Common Core Standards. According to the Common Core State Standards Initiative:

*The Common Core State Standards Initiative has identified information, media and technology skills are part of the key literacies for students in the 21<sup>st</sup> century. Media and Technology skills are blended throughout the Common Core Standards.*

*"Students who are College and Career Ready use technology and digital media strategically and capably. Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and mediums and can select and use those best suited to their communication goals." (Common Core State Standards Initiative, 2011).*

Common Core State Standards explicitly - and for the first time – highlight media and technology skills as necessary "to be ready for college, workforce and life in a technological society." In order for students to use technology and digital media strategically and capably, they need technology tools, digital resources and digital content for learning.

As the District transitions to the Common Core State Standards, the new computer adaptive summative assessment will be implemented in the third year of this technology plan. The Smarter Balanced Assessment (SBAC), the new online assessment, has important implications for the use of technology both in its administration to all students in grades 3-8 and 11, as well as the performance requirements in the assessments based on the new Common Core State Standards. As technology specifications are still being made and first pilots of the computer adaptive testing model just beginning as this Plan is written, the information to make the best decision on how to best administer the online assessment –in terms of the type and number of computers/devices that ultimately we'll need to be able to administer the summative as well as interim assessments associated with Smarter Balanced. The budget numbers, at this time, can only be subject to further information regarding the testing window, type of technology specifications

*The Smarter Balanced Assessment Consortium (SBAC), the new online assessment, has important implications for the use of technology both in its administration to all students in grades 3-8 and 11, as well as the performance requirements in the assessments based on the new Common Core Standards.*

and item analysis. As this assessment is computer adaptive, it is not necessary for the assessment to be given to students simultaneously. At this time, SBAC's testing window is provided as 12-weeks at the end of the school year. With that said, we have made an assumption that we'll need to build-up our inventory of laptops in order to administer the test to all students within that time period.

How can schools prepare students to be successful in this new environment? In our previous three-year Technology Plan, Interactive Whiteboards (Smartboards) were a focus – and have proven to be a game-changer in how and what instructional materials teachers present to students. Smartboards were a tool that, in effect, have transformed how many teachers teach. In our recent classroom teacher survey, an overwhelming 92% of our teachers say they use technology for classroom management (use productivity software, email, gradebook), and 70% say that they use technology regularly in teacher-driven instruction. The 70% indicates the number of teachers who have a Smartboard (specialists do not have them in their classrooms). Just as Smartboards were a game-changer for teachers in the next three years, we will see mobile devices as a game-changer for students.

*Smartboards were a tool that, in effect, transformed how many teachers teach... Just as Smartboards were a game-changer for teachers – in the next three years, we will see mobile devices as a game-changer for students.*

As we move to digital learning – including using online tools, content and resources – it is evident that the shift is toward to empower students to actively use technology in research, communication, collaboration, and problem solving. Designing such a learning environment requires reliable and

*As we move to digital learning – including using online tools, content and resources – it is evident that the shift is to empower students to actively use technology in research, communication, collaboration, and problem solving.*

ubiquitous access to technology for students. Reliable, robust wireless, mobile devices and access to a rich curriculum that includes digital content, tools and resources are the elements of a digital learning environment. Students agree. According to data from the Speak Up 2011 survey, students' priorities mirror those described in this

Plan. Students recommended that they be allowed to use their own device, be provided with unlimited, reliable and robust access to the Internet, be provided access to blocked learning sites such as YouTube, Twitter and others and be provided with tools to communicate with peers and teachers.

According to a classroom technology survey administered to Greenwich Public Schools teachers, prior to any formal policy in place, 25% of our teachers already allow access for students to use their personal device. About 43% already use mobile devices for teaching – whether to plan or deliver instruction- and 65% are interested in pursuing a BYOD (Bring your own Device) model.

*...25% of our teachers already allow access for students to use their personal device. About 43% already use mobile devices for teaching – whether to plan or deliver instruction and 65% are interested in pursuing a BYOD...*

Schools may take different paths to arrive at creating a digital learning environment, but according to the Federal Communications Commission (FCC) in a recent publication on the near-future of Digital Textbooks, the critical elements of a successful transition are consistent. These include:

- Leadership – A collaborative leadership that involves all stakeholders to build a collective vision and commitment.

- Planning – Thoughtful planning that is strategic and follows a gradual process that provides time for adjustments and improvements for success. The process should address digital content, curriculum, infrastructure, maintenance, instructional strategies, teacher training and technical support. Without these fully addressed and supported the plan will not succeed.
- Engagement – Teachers are critical to the success of any digital learning program. It is critical that they are involved in identifying the tools, content and recommending the types of training that they will need to support their teaching and students’ learning.
- Creativity and Flexibility – Any plan requires reflection, evaluation and revisions as necessary. Technology will change and those changes need to be considered as a plan is rolled out.
- Persistence and prioritization – In the world of education, it is too typical that new initiatives to roll out before the previous ones were fully implemented. A successful implementation plan requires focus and a phased-in, thoughtful and purposeful rollout.

Our 2012-15 Technology Plan seeks to create an engaging and empowering digital environment throughout our schools, classrooms – and beyond the school day and building. The plan seeks to provide a blueprint for creating such a digital learning environment. Following the recommendations for a successful transition to a digital learning environment, the Technology Plan provides action plans as blueprints to address each of the following:

*Our 2012-15 Technology Plan seeks to create an engaging and empowering digital environment throughout our schools, classrooms – and beyond the school day and building.*

- Leadership - The need to build consensus and vision with all stakeholders;
- Curriculum/Instruction - A suggested mobile learning plan that considers digital content (online textbooks, eBooks, resources), instructional strategies and curriculum that align to Common Core State Standards;
- Assessment – Support for the district transition to the Smarter Balanced Assessment and data systems to monitor continuous student growth;
- Professional Learning - Teacher training and support at the building level and involvement in the planning and selection of content and tools for their lessons.
- Infrastructure - A solid infrastructure plan that ensures reliable, robust wireless access, adequate bandwidth, and security to support a BYOD (Bring Your Own Device) program, appropriate staffing for support, and increased access to technologies to support the administration of the SBAC (summative and interim).
- Technology Operations – Ensuring that systems (inventory, mobile device management, acceptable use); operations systems including student information system, portals for teachers, students and parents, content management for district website, as well as protocol for considering, evaluating, piloting, adopting, and monitoring usage of new technologies and resources.

Technology, in and of itself, is not a magic bullet in education and for student achievement. However, when the tools are coupled with successful instructional strategies, curriculum that includes technology resources, and teacher training, we see successful results. In schools that have Wi-Fi, students may checkout a laptop from the media center, use iPads (as part of limited pilots) or bring their own device in to school to work independently.

*GHS students have highlighted the benefits of using the wireless connectivity; one student said that he used Wi-Fi while “studying for exams to access specific content in seconds – rather than spending a lot of time searching in a very heavy textbook.”*

GHS students have highlighted the benefits of using the wireless connectivity; one student said that he used Wi-Fi while “studying for exams to access specific content in seconds – rather than spending a lot of time searching in a very heavy textbook.” Several students commented that they “struggle to get on a computer in the Media Center because of heavy usage and are now bringing in their laptop or other device.” Up to 150 students use the GHS Media Center per class period.

Through our Mobile Learning Pilot Program, in 2011-12 we have seen several successful uses of mobile devices in our own schools. The GHS Integrated Science course, which features access to iPads in the classroom that come with apps and resources developed for the course, has been successful. Science teachers have reflected on how the students are participating in inquiry and problem-solving activities – they are able to quickly assess them using Google Forms and exchange files electronically using Google Docs. Teachers are then able to send the homework back to students with correction and feedback. Special Education students have been able to use iPads with appropriate apps to support them with their learning need. Students in a middle school reading class have been more engaged in reading using Nooks.

*...Teachers are then able to send the homework back to students with correction and feedback.*

The power of mobile devices is that they are lightweight, portable and connect to the Internet. In a real sense, mobile devices are an ideal “library on the go”. They are ideal for storing reference materials from periodicals and databases, to productivity tools that can be used to record via voice of text, they can be used as graphing calculators and as a skills reinforcement tool. In addition, they are able to store and display dozens of full-length books including literature, children’s books, novels, articles and journals. Students can also use virtual bookmarks, highlight passages and take notes, use a dictionary to look up words and organize notes. And, features such as media capture and audio make mobile devices (tablets) ideal for providing differentiated, personalized learning.

*In a real sense, mobile devices are an ideal “library on the go”. They are ideal for storing reference materials from periodicals and databases, to productivity tools and more...*

Being able to provide digital textbooks appeals to all stakeholders. Students and parents alike are excited about students “giving up” the 50-pound backpack filled with outdated textbooks. According to a national parent survey cited in “What do Kids say is the Biggest Obstacle to Technology at School?”, 70% of parents surveyed said they would purchase a mobile device for their child if the schools allowed it. Voting with their pocketbooks, over 58% said they would even buy a data plan for the device. Parents were particularly interested in their children using the device to access online textbooks. The 2012-15 Technology Plan provides a preliminary plan on phasing in mobile devices at the secondary level through a hybrid model (mix of district-provided and BYOD). Our Plan calls for a gradual approach that would phase-in a 1:1 model in the next 5-7 years. Although we are following a conservative approach, evidence in the rate of change in types of devices and costs may accelerate this plan. The literature is replete with much more ambitious predictions. In a recent article in *District Administration*, Cathleen Norris and Elliot Soloway predict:

*Make no Mistake: 2015 is the year in which each and every student in America’s k12 public school system will have a mobile device to use for curricular purposes, 24/7. For the majority of schools, one-to-one will be*

*achieved because they will have adopted a BYOD policy. (Norris and Soloway, 2012).*

Proceeding with a plan to increase mobile device access through a hybrid model of district-provided and BYOD will also provide much greater access for less. A study from ProjectRED ([www.projectred.org](http://www.projectred.org)) analyzed the cost of technology implementations and concluded that through proper implementation and a four-year refresh cycle, it is possible to actually reduce the cost of that type of access by \$600 per student with mobile devices based on reduced copy and paper costs, use of online assessments, online content including digital textbooks – as well as other benefits found in some studies of 1:1 such as decreased dropout rates. As we proceed in the next three years, the Technology Advisory Committee is committed to working to offset costs while maximizing learning through digital access. According Consortium for School Networking (CoSN), more and more schools are using mobile learning devices to help boost student engagement and achievement. In examining some of the best practices, CoSN recommends creating a strategic, multi-year plan for mobile learning, re-evaluating policies to include student- or teacher-owned devices, ensure buildings have sufficient, high-speed broadband and Wi-Fi access and listening to parents. In our efforts to implement a mobile learning plan, the focus must be on improving teaching and learning, not on mobile devices for the sake of mobile devices.

A survey of our classroom teachers shows that 92% use technology each day for management/productivity. The tasks for this area include using e-mail and our student information system for taking attendance and posting grades. About 70% of our teachers now use technology for teacher-driven instruction including using multimedia and Smartboards to present materials to their students. In keeping with national surveys, we found that teachers have adopted technology for administrative and productivity, however, technology integration for student-driven projects takes place consistently in only about 25% of our classrooms. Although teachers cite unavailability of access to technologies or wireless, they also point to lack of training, time to create lessons and practice. A national teacher survey and a large body of literature supports the idea that technology training focusing on instructional uses is a major factor in fostering teachers' positive attitudes toward technology integration. Teachers need to move from technology training on technology tools and move to a more intensive curriculum-based technology training based on National Teacher Standards (ISTE, 2010). According to Zhao and Bryant, one factor that contributes to lower than expected integration is the lack of curriculum and technology integration support after the initial training. With this data in mind, the Technology Advisory Committee designed a comprehensive plan to provide a systematic training program for all teachers in the Greenwich Public Schools. The plan includes the development of a GPS Technology Institute through which teachers can take a variety of courses on different topics (aligned to national standards for teachers) and receive Certificates based on completion of a series of offerings. The Professional Learning plan also seeks to provide other means of support through building leadership capacity and "power users".

*In keeping with national surveys, we found that teachers have adopted technology for administrative and productivity, however, technology integration for student-driven projects takes place consistently in only about 25% of our classrooms... Although teachers cite unavailability of access to technologies or wireless, they also point to lack of training, time to create lessons and practice.*



A strategic plan to prepare our students for college and the workforce begins with a solid foundational infrastructure. This plan outlines several areas that need to be established prior to any large-scale implementation of a 1:1 district-provided or BYOD plan or, even the buildup of more laptop access to provide access to the required online assessment. The elements in the infrastructure goal include ubiquitous, reliable wireless access, improved and sufficient access to laptops/desktops, educator/administrator systems, and managing costs through efficiencies and maximizing service models.

Finally, as we move through the next three years with our new Technology Plan, management issues related to emerging technologies, efficiencies of current and new systems, and policies and procedures to guide the proper implementation, monitoring and evaluation of all our technologies will become more critical. The section of this Plan devoted to Productivity and Efficiency, in effect, provides guidelines and possible systems to address so many of the unknowns and so much of the constantly changing landscape of technology in our schools.

Given the quickly and constantly changing emerging technologies, it is clear to see that 2015 will mark a time when mobile devices and digital content become more the norm rather than the exception in our classrooms.

According to the Common Core State Standards Initiative,

“technology itself is changing quickly, creating a new

urgency for students to be adaptable in response to the change.” However, the constant changes also should be an indication that our 2012-15 Technology Plan is only a blueprint that will necessarily adapt to changes, as well as requirements by the State and local economic pressures. Our Technology Plan is actually only the beginning of an ongoing process to provide students with an optimal experience for preparing for college and the workforce.

*Technology itself is changing quickly, creating a new urgency for students to be adaptable in response to the change.”*

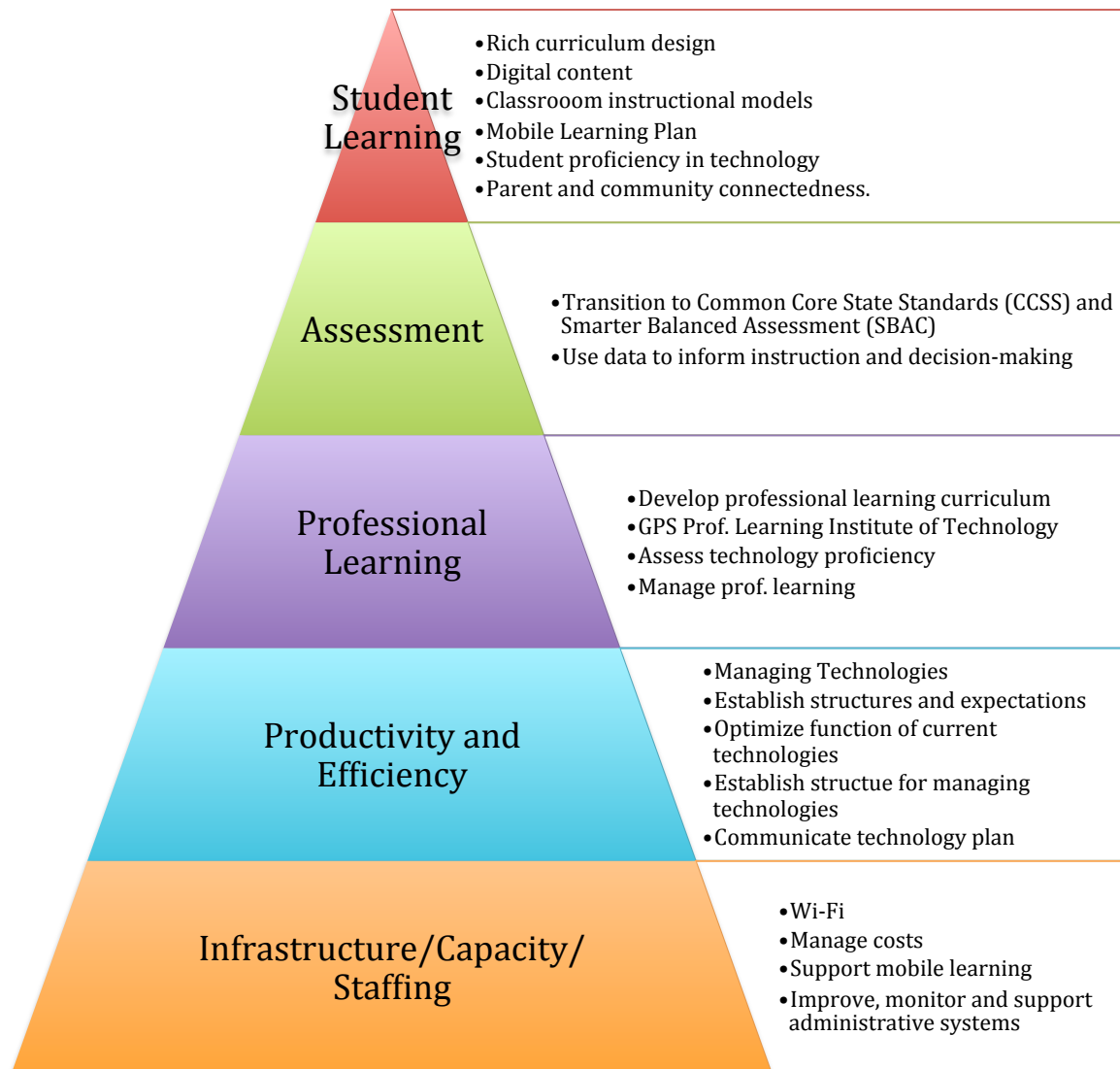


## Plan Implementation – Executive Summary

Our journey for creating a vision for the 21st century learning, providing teachers with the tools and resources needed to teach in context and assessing student ICT skills will enable us to ensure their future success. The goals of the Greenwich Public Schools Technology Plan can help frame the larger district discussion on a vision that includes 21st Century learning and skills.

The goals of the Greenwich Public Schools Technology Plan will help us expand the vision to ensure that students are prepared for their future. Each of the following goals must be supported by the following elements: IT Readiness/Capacity, Professional Learning, Policies/Procedures, Communication and Staffing.

Diagram Representing Technology Plan and Key Areas of Focus:



## **Goal 1: Engaging and Empowering Learning Experiences**

**Goal:** All students will have empowering learning experiences and engaging learning environments including a curriculum that is student-centered, inquiry-based and reflects 21<sup>st</sup> century skills as well as 24/7 access to digital content, tools and resources.

The unprecedented increase in the capability of global, ubiquitous and interactive technologies has resulted in a disappearance of barriers between countries, people, social groups, and generations. Collaboration with peers, experts and the global community evidences a critical paradigm shift of how students learn. Our society has become participatory through the capacities of technologies and needs of our changing landscape. The changes in our world have introduced an urgent need to teach our students skills and processes that transcend as well as interweave throughout all curriculum areas to help students to not only adapt to the changing paradigm but also succeed and thrive in any content area.

By focusing on providing engaging and empowering learning experiences, the GPS Technology Plan supports the district goal of ensuring a smooth transition to the Common Core Standards and Smarter Balanced Assessment (SBAC) by ensuring that they meet the standards, are college and career-ready through rich curriculum, digital content, personalized instruction and appropriate digital tools and systems.

- **Objective 1: Curriculum Alignment: Design student-centered, inquiry-based curriculum that empowers students using 21<sup>st</sup> century skills and processes.**
  - Curriculum Mapping
  - Transdisciplinary Units
  - Capstone / Mini-Capstone
  - Embed information literacy and technology skills throughout specifically as it relates to alignment with Common Core/SBAC.
- **Objective 2: Digital Content: Provide access to digital content with universal design features – in and out of the classroom.**
  - eBooks (to support new units, non-fiction, read – alouds) – to be provided through a lending program through Media Centers as well as through classrooms.
  - eTextbooks – Transition Course Textbooks to Digital Textbooks
  - Instructional Software/Apps/Web 2.0 – Provide systematic review and monitoring of online instructional resources.
- **Objective 3: Establish Classroom Instructional Models**
  - Continue Smartboard Plan – expand to K-2 and specialist classrooms in the next three years (with budget numbers being reduced substantially by 2014-15).
  - Establish K-2 pods of mobile devices or technologies as learning centers (about 4 per room).
  - Provide document cameras in identified classrooms, per teacher need.
  - Build up laptop inventory through leasing/refresh model to accommodate administration of SBAC and provide additional access for project-based learning.
- **Objective 4: Mobile Learning Plan: Develop a strategic plan to gradually roll out mobile learning devices.**
  - Research/Evaluate: Research, evaluate and make recommendations on how to best provide access to mobile learning resources. Including considerations of district-provided, BYOD plans, hybrid plans and impact of digital divide.

- Design Curriculum: Design curriculum for courses in mLearning (Mobile Learning) cohort.
  - Proposal for Strategic, Roll-out Mobile Learning Plan – ***(Actual Plan will be Revised Yearly and Presented as Part of Budget Process).***
- **Objective 5: Continue improving student proficiency in information, media and technology literacy skills.**
    - Students will achieve 95% proficiency on the 21<sup>st</sup> Century Skills Literacy Assessment to 5<sup>th</sup> and 8<sup>th</sup> graders by Spring 2015.
    - Develop performance-based task assessments identified for technology operations skills (keyboarding, word processing, spreadsheets, multimedia, databases)
    - Design and implement a survey course for 9<sup>th</sup> graders – modeled on “iSkills 21” by 2015 – to review digital citizenship, effective use and care of mobile devices including organizational and online notetaking skills.
  - **Objective 6: Address “Digital Divide” through identification of students and partnerships with community organizations.**
  - **Objective 7: Explore ways to engage and involve parents and community members in support of the Greenwich Public Schools Technology Plan.**

## Goal 2: Assessment

**Goal:** Greenwich Public Schools is committed to leveraging the power of technology to measure what matters and use assessment data for continuous improvement.

The Greenwich Public Schools is committed to utilizing powerful technology systems and tools to measure outcomes and to focus our efforts on continuous improvement at all levels of the organization. As we focus our efforts in the area of technology and assessment, two priority areas emerge:

- Common Core Standards
  - Supporting the transition to the new Common Core Standards (CCS) and the Smarter Balanced Assessment (SBAC)

In an effort to support the transition to the Common Core Standards (CCS) and the Smarter Balanced Assessment (SBAC), this district must research the technology needs required for students to take the assessment within the allotted 2-3 month testing window. This will require the district to conduct a complete “needs assessment” to determine necessary hardware, software, bandwidth, and staffing required to support the new SBAC interim and the summative, performance tasks and computer adaptive assessments in the areas of reading, writing and math (reference appendix: SBAC Assessment System).

Additionally, the district must develop a comprehensive transition plan to shift from current CMT4/CAPT3 testing processes and procedures to those required by the new assessment system. This will include the development of a timeline for scheduling and implementing the assessment in grades 3-8 and 11, across fifteen site locations. Additionally, various content areas will field test/pilot various interim and formative assessments as they are made available through the SBAC Consortium and the state of Connecticut. Finally, extensive research will occur to identify the availability to export data as well as determine potential reporting options for all constituents within the district (e.g. students, teachers,

parents, building administrators, district administrators).

To support this process, extensive training must be provided to all constituents to build capacity and understanding on the assessment and instructional shifts inherent within CCS and SBAC. This will include professional learning on the interim assessments, performance tasks and the computer adaptive assessment. Surveys will be administered to determine adult and student learning needs in the area of technology skills and competencies. Goal 3 and other components of the Tech Plan will discuss professional learning at greater lengths.

Finally, a comprehensive communication plan must be generated to communicate to all stakeholders the specifics of the transition plan, professional learning needs as well the results of in-depth research and analysis of our technology needs to implement the SBAC in 2014-15.

- Data Driven Decision-Making
  - Supporting Data Driven Decision-making through the analysis of data to focus improvement efforts at all levels.

The Greenwich Public Schools is committed to the Collaborative Decision-making process at all levels (District Data Team, Building Data Teams, Instructional Grade-level Data Teams and Student Assistance Teams). To support these processes, the district provides a tool, *eLearning Studio*, that was developed specifically for the Greenwich Public Schools. This tool is available for all appropriate staff to facilitate to the analysis of data, to focus improvement efforts and to target learning needs. This tool is continually refined and expanded to meet the district's growing need for data analysis and reporting. Please reference the appendix titled: *eLearning Studio- One Platform for SRBI & Learning Management* for an in-depth description of the various components of this data analysis/reporting tool.

The eLearning Studio tool is designed to support all levels of the collaborative decision-making process. Teachers/departments input or upload Tier I/Core benchmark and formative assessments with identified targets to support the Instructional Data Teams (IDT). The Technology Plan will support district and building staff by making available assessments (provided by Curriculum Coordinators/Program Administrators) accessible on-line in RTI Studio. The Technology Staff will work with the Curriculum Coordinators and Program Administrators to design appropriate assessments, set benchmark targets, assess data on-line and report results to Board Members, parents, teachers and administrators. The Tech Plan will also support the transition to the SBAC Assessment. As more information is available, the plan will be adjusted to accommodate this new assessment system. Finally, the eLearning Studio tool supports Tiers II/III with a intervention plan and progress-monitoring system. During the IDT process, teachers are able to identify students who require more time on focused, intense instruction in a targeted area of focus. RTI Studio manages and tracks student progress in Tiers II/III to determine effectiveness of instruction.

As we refine our processes, this tool will also be utilized to identify students who require additional services such as Summer School. Another goal is to utilize the tool to generate district staffing models that are based on student and staff learning needs.

### **Goal 3: Connected Teaching and Learning**

**Goal:** Professional educators will be supported individually, and in teams, by technology that connects them to data, content, resources, expertise and learning experiences that can empower and inspire them to provide more effective teaching for all learners.

Through a systematic, comprehensive approach to professional learning, Greenwich Public Schools will support educators to ensure that they are able to inspire and engage all learners through the use of technology. This will be accomplished by clearly defining core competencies, developing accountability measures, and providing individualized, meaningful professional learning. This approach will promote innovation and encourage authentic integration of technology into all aspects of the curriculum to ensure that students are prepared to take an active role in the technology rich world of the 21st century.

- Develop a comprehensive professional learning **curriculum** for teachers, administrators and non-certified staff to promote the purposeful and effective use of technology within the educational settings.
- Design and implement the **GPS Professional Learning Institute of Technology**, through which teachers, administrators, and non-certified staff will be able to pursue certificates of expertise on use of technology within the educational setting.
- Develop meaningful **assessments** for staff to determine technology proficiency level of teachers, administrators, and non-certified staff in order to provide differentiation in professional learning, as well as to evaluate effectiveness of professional learning experiences.
- Develop a vehicle for the oversight of the implementation, **management**, and continued development of the technology professional learning curriculum and GPS Professional Learning Technology Institute.

#### **Goal 4: Productivity and Efficiency**

**Goal:** Establish structures and processes for the productive and efficient management of technologies as both instructional and operational tools and resources.

##### ***Objective 1: Establish structures and expectations for managing current technologies***

###### ***Steps/Strategies:***

- a. Needs assessment of administrators and support staff (completed February 2012)
- b. Assess inventory (systems and hardware) and establish roles, responsibilities, and expected use
  - i. Update Job Descriptions
  - ii. Develop Technologies Resource Guide
- c. Build building-based capacity
- d. Update policies and procedures
- e. Showcase use of technology, share best practices

##### ***Objective 2: Optimize functionality of current technologies***

###### ***Steps/Strategies:***

- a. Web Site (Review 2012-13)
- b. Intranet Portals
- c. Mass eCommunication System (Parentlink)
- d. Learning and Information Systems (e.g.: Google Apps, Naviance, eLearning Studio, Destiny, Aspen, etc.)
- e. Update policies and procedures as necessary

##### ***Objective 3: Establish structure for anticipating, exploring, and managing emerging technologies***

###### ***Steps/Strategies:***

- a. Establish Technology Advisory Group
  - i. recommend plan for anticipating/monitoring trends (Conferences, workshops, information sharing practices)
  - ii. recommend standard organizational system for piloting emerging technologies
  - iii. recommend standard organizational system for adopting new technologies
  - iv. develop/update policies and procedures as necessary

***Objective 4: Facilitate widespread knowledge and understanding of GPS Technology Plan***

***Steps/Strategies:***

- a. Develop and execute Communications Plan to all stakeholders

The focus of this goal area is to establish clear and comprehensive organizational structures and processes for managing technology, and expectations for using technology both operationally and instructionally. As the opportunities for using technology-based systems, devices, and programmatic resources and applications increase daily, so does the need to carefully manage the use of these technologies. The overall objective is to optimize the use of the available technologies in support of the most effective instruction and efficient operations for the District. The first step is to clearly establish the expectations around roles, responsibilities and use of the technologies that are currently employed by the District. It is our intent to create a central resource for what technologies are available, what purposes these resources serve, how the systems are expected to be used, and how to access training and tech support. It is also important to establish a routine look at optimizing the functionality of the systems we are currently using to determine if there are better ways to meet the District's evolving needs with the technologies we have and/or if we need to explore other or additional options. To this end, the plan outlines the need to establish a Technology Advisory Group. This group would be responsible for anticipating and monitoring trends in technology systems and making recommendations to the administration with regard to ongoing improvements. Finally, this goal area includes the development of a Communications Plan to ensure widespread knowledge and understanding of the District's vision for technology, and the decisions and progress made toward achieving the goals outlined.

**Goal 5: Infrastructure for Teaching and Learning**

**Goal:** All students and educators will have access to a comprehensive infrastructure for learning when and where it is needed.

In planning for the future needs of the District the following must be considered:

- The increase in personal computing to support personalized learning through thoughtful investments in technology.
- The emergence of personal computing devices that require wireless connectivity and increased bandwidth.
- High availability of network performance to ensure that users can access the network whenever necessary.
- Necessary support staff to provide technical support.

Greenwich Public Schools maintains its data communications network routinely through the Capital Improvement Plan. The technology provided must support current and new methods to increase productivity and efficiency both in the instructional programs and administrative computing. Utilizing technology to enhance the way information is communicated and accessed provides an optimum learning



experience for students and more efficient tools and resources for faculty, staff and administrators. Part of this challenge is providing adequate staffing and financial resources to deliver and maintain the needed communications networks and technical support.

The Town of Greenwich shares a 10/100 Mbps connection to the Internet. The school district is connected by Gigabit fiber links between schools and the main district office. This service provides Internet connectivity to all district buildings. The service is filtered in compliance with CIPA and eRate requirements. As part of the Capital Improvement Plan, in the next three years, all school buildings will have Wi-Fi installed and completed. All planned new construction or upgrading for data communications will be Cat 6 station and 1000Base-LX (1000 Mbps Gigabit) backbone wiring.

The District needs to provide technology resources to support existing and new academic programs such as digital learning, Distance Education, etc. These services require a robust, high speed, wide bandwidth, and communication network infrastructure. The network must have the capability to provide sufficient bandwidth for present and future requirements, operate on a 24/7 schedule and provide required power back-up and technical support services.

**Objective 1: Wi-Fi Access:** Build Reliable, Robust Wireless Capacity

- Complete Wi-Fi access in all our school buildings (through Capital Improvement Plan).
- Evaluate and ensure Wi-Fi, bandwidth capacity and speed of connectivity is adequate for current inventory and anticipated addition of laptops and mobile devices.
- Re-evaluate the use of filters and firewalls and explore moving to a more flexible method to allow teachers and students access to critical web tools such as YouTube.

**Objective 2: Manage Costs:** Manage ongoing technology costs

- Continue leasing model for desktop and other technology with 3 to 4-year cycle.
- Review technology needs with building, media staff and Coordinators.
- Monitor School Dude maintenance reports.

**Objective 3: Support Mobile Learning:** Develop thoughtful plan for moving toward 1:1 Mobile Computing

- Develop a funding plan
- Research types of devices
- Evaluate needs technical specifications of new Smarter Balanced Assessment
- Provide sufficient useable computers to administer the Smarter Balanced Assessment

**Objective 4: Staffing** - Build Capacity for IT and Technology Integration Support through appropriate staffing.

- Review IT staffing and structure and make changes, as appropriate, based on recommendations of consulting firm Blum Shapiro. Some considerations should be given updating job descriptions, establishing minimum expectations and developing a comprehensive support structure to build the capacity of current IT staff.
- Add district-level IT staff as needed based on our analysis.
- Identify needs at either specific buildings or for district-level system implementation and provide additional days (during the summer) to current Media Technical Assistants to assist with those needs.

- Explore ways of outsourcing through cloud-based services or virtualization to maximize Technician: User: Systems ratios.
- Review current staffing model dedicated to supporting teachers in the classroom and make changes, as appropriate, based on recommendations of consulting firm Blum Shapiro.
- Conduct comparative district survey to review types of positions employed to support teacher training for technology.
- Add a K-8 and a 9-12 Technology Integration Specialist (one in 2013-14 and one in 2014-15) as appropriate based on budget constraints.

**Objective 5: Smarter Balanced Assessment** – Support implementation of Smarter Balanced Assessment

- Understand technology requirements from State
- Establish pricing models for mobile labs
- Establish model for testing
- Establish a purchasing plan and purchasing rationale

**Objective 6 - 8: Educator/Administrator/Stakeholder Technology** - Improve Capabilities and Efficiencies of Administrative Systems

- Continue implementation of Portals for Parents to improve communication.
- Extend services provided through the Student Information System to include IEP module and improve upon its usage of online attendance, progress grading.
- Establish procedures for usage of technology.
- Manage, support and monitor other projects currently planned for evaluation and define a process for project management with accountability and clarity of responsible issues.

**Goal 1: Engaging and Empowering Learning Experiences**

National Educational Tech Plan	State Educational Tech Plan
<b>1.0 Learning: Engage and Empower</b> <i>All learners will have engaging and empowering learning experiences both in and out of school that prepare them to be active, creative, knowledgeable and ethical participants in our globally networked society.</i>	<b>Goal 1: Engaging and Empowering Learning Experiences</b> <i>All learners will have engaging and empowering learning experiences both inside and outside of school that prepare them to be active, creative, knowledgeable and ethical participants in our globally networked society.</i>
<b>What will your district do over the life of this local Educational Tech Plan to ensure that learning experiences are empowering, engaging and supported by digital tools?</b>	

**Goal: All students will have empowering learning experiences and engaging learning environments including a curriculum that's student-centered, inquiry-based and reflects 21<sup>st</sup> century skills as well as 24/7 access to digital content, tools and resources.**

**Action Plan for Goal Area 1****Objective 1: Curriculum development/alignment: Design student-centered, inquiry-based curriculum that empowers students using 21st century skills**

Strategy How Will We Get There?	Accountability Who is Responsible?	Timeline When?	Evidence How will we measure?
<b>Align Curriculum to Common Core Standards</b> - Integrate online research, media/technology skills in Language Arts, Science and Social Studies core maps as reflected in the Common Core Standards and the SMARTER Balanced Assessment.			
Evaluate skills and standards required of students in the Common Core and SMARTER Balanced Assessment and align to Media/Technology curriculum.	Media Tech Coordinator Media Staff (rep. from each grade level)	By December 2012	Alignment document
Audit assured experiences that meet expectations of Common Core 21 <sup>st</sup> century skills in current curriculum.	Media Tech Coordinator Media Staff (rep. from each grade level) Subject-area Coordinators	By Sept 2013	Completed listing
<b>Transdisciplinary Units (K-5 grades)</b>			
Implement grade-level transdisciplinary units based on	Asst. Supt., CIPL Media Tech	One unit per grade level -based on science content	Evaluation of student work – performance tasks

inquiry-oriented, authentic and relevant experiences (2 per grade level) in elementary schools – the first based in science content, the second based in social studies content.	Coordinator with respective Curriculum Coordinators  Transdisciplinary Committee	(implement in 2011-12 /refine by 6/2013)  One unit per grade level based on social studies content (implement in 2012-13, refine by 6/2014)	(evaluation based on performance task rubrics)
<ul style="list-style-type: none"> <li>Identify and refine technology resources and tools associated with each unit and align to media/technology curriculum and pacing guides.</li> </ul>	Media Tech Coordinator  Media Tech District-wide Staff	Pacing guides/resources identified, implemented and refined as part of the units by 6/2014.	Pacing guide document available by grade level  Mini-assessments that measure identified 21 <sup>st</sup> century skills embedded in units
<ul style="list-style-type: none"> <li>Identify and provide access to non-fiction digital texts to support units and Common Core guidelines for balance of texts.</li> </ul>	Lang. Arts Coordinator w/ Media Tech Coordinator and subject-specific Coordinators and Instructional Coaches  Teacher curriculum teams	Digital texts for 1 <sup>st</sup> unit by 6/2013  Digital texts for 2 <sup>nd</sup> unit by 6/2014	Evaluation measures: Circulation statistics of non-fiction /digital texts  Teacher feedback  Student work
<b>Curriculum Mapping System (all grade levels)</b>			
Curriculum Mapping: <ul style="list-style-type: none"> <li>Use Curriculum Connector system to map and align objectives for Mathematics, Language Arts and Literacy in History/Social Studies, Science and Technical Subjects to the new Common Core Standards.</li> <li>Begin incorporating suggested 21<sup>st</sup> century learning activities through core mapping.</li> <li>Evaluate/monitor core maps to assess for gaps, repetitions, and interdisciplinary opportunities.</li> </ul>	Asst. Supt of CIPL, Curr. Coordinators Coordinator, Media/Tech	2012-13  Phase 1: Completed by 6/2013  Phase 2: Completed by 6/2014	Completed electronic core maps  Teachers' access/usage of system  Data from curriculum mapping system will highlight 50% increase in usage and 100% alignment to CCSS

<ul style="list-style-type: none"> <li>Conduct professional learning for teachers on the tool to encourage collaboration and access to quality resources, learning experiences.</li> </ul>			
<b>Capstone and Mini-Capstone Experiences (5<sup>th</sup>, 8<sup>th</sup> and 9-12<sup>th</sup> grades)</b>			
<ul style="list-style-type: none"> <li>Incorporate 21<sup>st</sup> century skills in the development of the Capstone Project for high school students and mini-capstone culminating experiences for 5<sup>th</sup> and 8<sup>th</sup> graders including research/information fluency, communication using digital media, digital citizenship and other technology operations.</li> <li>Development and implementation of an ePortfolio system to support the mini-capstone and capstone experiences.</li> </ul>	Asst. Supt. CIPL  Media Tech Coord.  Capstone Sub-Committees	2012-13 – pilots begin  2013-14 – implement at high school  2014-15 – implement at middle/elem.	Student work through ePortfolio

## Objective 2: Digital Content : Provide access to digital content with universal design features – in and out of the classroom

Strategy How Will We Get There?	Accountability Who is Responsible?	Timeline When?	Evidence How will we measure?
<b>eBooks – Provide access to eBooks, eTextbooks and Tools with Universal Design Features</b>			
<b>Re-evaluate strategy</b> for distribution of online resources – review platforms and services for distributing eBook content including: OverDrive, FollettShelf and others	Media/Tech Coord. Emerging Tech Advisory L.A. Coordinator Subject-area Coord.	June 2013	Usage statistics
Increase access to eBooks in Media Centers.	Media/Tech Coord. Media Specialists	By 2012 – 5% of book budget By 2013 – 10% of book budget By 2014 – 20% of book budget	Destiny circulation statistics  Overdrive/Follett statistics  Survey
Increase access to eBooks in the classroom.	Lang. Arts Coord. L.A. teachers/specialists Media Specialists	By 2012 – 5% of book budget By 2013 – 10% of book budget	Destiny circulation statistics  Overdrive/Follett

		By 2014 – 20% of book budget	statistics Survey
Build-up class set of “lendable” devices in each media center for use with eBooks/eTextbooks.	Media/Tech Coord. Media Specialists	By 6/2012 – est. 10 per media center By 6/2013 – est. 1 class set By 6/2014 – 1 class set & add'l in secondary media centers	Circulation/usage statistics
<b>eTextbooks – Transition Course Textbooks to Digital Textbooks</b>			
Conduct analysis of current availability of digital textbooks	Asst. Supt. CIPL Curriculum Coordinators	Complete analysis by 11/2012	Analysis document
Detailed analysis of budget offsets related to online textbooks	Dir., Ed Tech Dir., Operations Media/Tech Coord.	Analysis by 11/2012 to coincide w/budget review for 2013-14	Final budget analysis
Science - Provide eTextbooks in Secondary through integrated science, BioChemistry, AP Bio, and Middle School Science courses.	Science Coordinator  Teacher Curriculum Teams	Analysis by 11/2012 to coincide w/budget review for 2013-14	Final budget analysis
Language Arts – Explore the use of eTexts in Language Arts Classrooms to support new units of instruction, provide access to eTexts for core titles.	Language Arts Coordinator  Teacher curriculum teams.	Analysis by 11/2012 to coincide w/budget review for 2013-14	Final budget analysis
<b>Instructional Software/Apps/Web 2.0 Resources – Provide systematic review and monitoring of online instructional resources for all learners and to meet identified needs.</b>			
Review current instructional software/apps/web 2.0 resources and make recommendations for continued usage.	Media/Tech Coord. Curriculum Coord. Emerging Tech Adv.	1 <sup>st</sup> Review – 10/12 2 <sup>nd</sup> Review – 10/13 3 <sup>rd</sup> Review – 11/13	Usage monitor / survey re: appropriateness and alignment w/curriculum
Identify/review and select appropriate web-based digital resources	Media/Tech Coord. Curriculum Coord. SPED staff Emerging Tech Adv.	1 <sup>st</sup> Review – 10/12 2 <sup>nd</sup> Review – 10/13 3 <sup>rd</sup> Review – 11/13	Monitor usage and rubric-based evidence
Identify/review and select appropriate – district-approved apps for specific needs.	Media/Tech Coord. Curriculum Coord. SPED staff	1 <sup>st</sup> Review – 10/12 2 <sup>nd</sup> Review – 10/13 3 <sup>rd</sup> Review – 11/13	Monitor usage and rubric-based evidence

	Emerging Tech Adv.		
Identify/review and select appropriate – district-approved instructional software per identified needs and to support skills	Media/Tech Coord. Curriculum Coord. SPED staff Emerging Tech Adv.	1 <sup>st</sup> Review – 10/12 2 <sup>nd</sup> Review – 10/13 3 <sup>rd</sup> Review – 11/13	Monitor usage and rubric-based evidence

### Objective 3: Establish Classroom Instructional Models

Strategies: What Steps Will You Take?	Accountability: Who Will Be Responsible?	Timeline: When (be specific, e.g., by 10/1/13)?	Evidence: How will you measure?
<b>Establish Classroom Instructional Models for Technology</b>			
Continue the Smartboard Plan to complete K-2 classrooms.	Media/Tech Coord.	7/1/2012	All K-2 classrooms to be outfitted with Smartboards
Expand Smartboards to non-academic classrooms (ex: Music, Art)	Media/Tech Coord.	7/1/2013 7/1/2014	Completed identified classrooms, per needs.
Establish pods of technologies (computer/mobile device) for K-2 classrooms to establish learning centers (3-4 per classroom)	Media/Tech Coord. Dir. Ed Tech	7/1/2014	Inventory by classroom
Provide document cameras in identified classrooms, per teacher need.	Media/Tech Coord.	7/1/2013 7/1/2014	Inventory of document cameras
Build-up laptop inventory through leasing/refresh model to accommodate administration of SBAC and provide additional access for project-based learning.	Dir. Ed Tech Media/Tech Coordinator	7/1/2012 7/1/2013 7/1/2014	Results from state Technology readiness tool  Details in Goal 5
Provide listing of district-approved software/instructional tools for each classroom.	Media/Tech Coord. Dir. Ed Tech	7/1/2012	Completed listing of district-approved software/tools

## Objective 4: Mobile Learning Planning – Develop a strategic plan to gradually roll out mobile learning devices

Strategies: What Steps Will You Take?	Accountability: Who Will Be Responsible?	Timeline: When (be specific, e.g., by 10/1/13)?	Evidence: How will you measure?
<b>Research / Evaluate: Research, evaluate and make recommendations on how to best provide access to mobile learning resources. Include consideration of district-provided, B.Y.O.D. plans, Hybrid plans, “digital divide” impact and solution.</b>			
Review options for mobile devices including iOS, android tablets, eReaders – make recommendations based on purpose, need, flexibility, cost and future application.	Dir. , Ed. Technology Media/Tech Coord. Emerging Tech. Adv.	November 2012	Recommendation/ guidelines for purchase of mobile devices
Research /evaluate and recommend the feasibility of a B.Y.O.D. Plan (Bring-your-own-Device)	Dir. , Ed. Technology Media/Tech Coord. Building Leadership Emerging Tech. Adv.	9/2012 – BYOD Pilot classroom 9/2013-Expand pilots 9/2014 – if recommended, full BYOD availability	Student / teacher access to technology reported based on surveys  Formative assessments
Explore funding options including partnerships with Greenwich Alliance, PTA, businesses to provide “home access” and address digital divide.	Dir. , Ed. Technology Media/Tech Coord. Building Leadership Emerging Tech. Adv. PTA Leadership	Complete plan by 9/2013	Students in need provided w/home access
Finalize mobile learning policies/procedures and strategy for district-provided devices including: <ul style="list-style-type: none"> <li>Acceptable use,</li> <li>purchasing guidelines for devices and apps,</li> <li>inventory procedures</li> <li>CIPA guidelines</li> <li>Insurance</li> <li>Communication to parents</li> </ul>	Media Tech Coord. Director, Communications HR Director Building leadership Mobile Learning Committee	November 2012	Completed policies/procedures
Conduct a needs assessment for PD and IT support Identify building infrastructure requirements	Media Technology coordinator and Mobile Learning Committee will create survey for teaching staff and administrators	Survey sent out 1/2012	Survey results / summary (see appendix)



Evaluate pilot programs and assessment information, review devices, and determine the instructional needs in order to choose appropriate devices.  [Mobile Learning Committee will evaluate, attend technology conferences, choose site visits at schools using mobile device models, and meet with vendors to review devices and recommend]	Mobile Learning Committee	September 2012 - June 2013  Ongoing	Report / data from assessments, site visits and vendors  Recommendation based on data
<b>Design Specific "Cohort" mLearning Experiences</b>			
Develop specific mLearning curriculum for science, social studies, media and English course cohorts.	Subject-area Coordinators, Media/Tech Coordinator, lead teachers	By June 2013	Completed curriculum including instructional resources
Implement new cohort curriculum.	Subject-area Coordinators, Media/Tech Coordinator, lead teachers	September 2013  Pilot w/cohorts in 6 <sup>th</sup> and 9 <sup>th</sup> grades	Benchmark assessment data based on subject-area. Surveys Observations
Continue adding specific mLearning curriculum as more students/teachers participate.	Subject-area Coordinators, Media/Tech Coordinator, lead teachers	September 2014	Progress monitoring on assessment data
<b>Proposal for Strategic, Roll-out Plan – (Actual Plan will be Revised Yearly and Presented as Part of Budget Process)</b>			
Teachers receive devices	Media/Technology coordinators	July 2013 - January 2014	100% of 6 <sup>th</sup> and 9 <sup>th</sup> grade teachers with devices by August 2013
Teachers and administrators oriented to mobile technology	Media/Technology	Mobile Orientation August/September 2013 - 2014	100% of teachers with devices receive formal orientation within 90 days of device receipt
District-wide Faculty training on 1:1 teaching. Monthly ongoing consistent support in every building.	Media/Technology	1:1 Teaching and Learning PD - 2013-2014	Per Professional Learning Plan

Audit and evaluate curriculum to support and include digital learning.	Assistant Superintendent of Curriculum with Media Technology staff support	2012 - 2013	Rubric or checklist to evaluate technology integration and identify current best practices
Develop appropriate digital resources, online tools, and teaching strategies to maximize student achievement of learning.	Curriculum teams collaborating with Media/Technology staff	All curricular areas 6 <sup>th</sup> and 9th-2012 –13, 2013-14	District-wide toolbox of resources. Online tools, teaching strategies and online learning opportunities
Develop 6th/9th grade English, Science, Social Studies courses to coincide with device distribution.	English Science and Social Studies coordinators and Media Technology staff	September 2012 - June 2013	Course description and curriculum plans
Pilot 6/9 grade courses	Course teachers and curriculum coordinators	September 2013 - June 2014	Rubric or checklist to evaluate technology integration and identify current best practices
Full Launch 6/9 grade courses	Course teachers and curriculum coordinators	September 2014 - June 2015	Rubric or checklist to evaluate technology integration and identify current best practices
Develop Student Training Modules for care and use of mobile devices for learning.	Media/Technology	September 2012 - June 2013	100% of students attend training and sign mobile device responsibility agreement before receiving device

### Objective 5: Student proficiency with information, media and technology literacies

Strategies: What Steps Will You Take?	Accountability: Who Will Be Responsible?	Timeline: When (be specific, e.g., by 10/1/13)?	Evidence: How will you measure?
<b>Continue improving student proficiency with information, media and technology literacies</b>			
Ensure that students in 5 <sup>th</sup> and 8 <sup>th</sup> grade achieve 95% proficiency on the 21 <sup>st</sup> Century Skills Assessment	Media/Tech Coord.	7/1/2013	Monitoring Report
Develop performance-based tasks with identified technology operations skills – keyboarding, word processing, spreadsheets, multimedia and databases	Media/Tech Coord.	7/1/2013 7/1/2014	Results from formative tasks.
Design and implement a survey course for 9 <sup>th</sup> graders to model iSkills 21 by 2015 to review digital citizenship, effective use and care of mobile devices including organizational and notetaking skills using online tools	Media/Tech Coord. GHS Media Dept.	7/1/2014	Course approval

### Objective 6: Address the “Digital Divide”

Strategies: What Steps Will You Take?	Accountability: Who Will Be Responsible?	Timeline: When (be specific, e.g., by 10/1/13)?	Evidence: How will you measure?
<b>Address the Digital Divide</b>			
Continue working with schools to determine number and which students do not have access to Internet at home.	Media/Tech Coord. School Leadership Guidance Dir. Comm.	By July 2015	Statistics for home access
Partner with community agencies, i.e., Greenwich Alliance and others to determine funding and support to families and access to Internet.	Media/Tech Coord.	7/1/2013 7/1/2014	Results from formative tasks.

## Objective 7: Parent and Community Connectedness

Strategies: What Steps Will You Take?	Accountability: Who Will Be Responsible?	Timeline: When (be specific, e.g., by 10/1/13)?	Evidence: How will you measure?
<b>Parent and community connectedness</b>			
Explore ways to engage and involve parents and community members in support of this Technology Plan through participation in Emerging Technologies Committees, PTA Tech Comm activities, and partnerships with community organizations.	Dir. Comm. Media/Tech Coordinator Leadership	By July 2015  Ongoing	Participation

**Goal 2: Assessment: Measure What Matters**

National Educational Tech Plan	State Educational Tech Plan
<b>2.0 Assessment: Measure What Matters</b> <i>At all levels, our education system will leverage the power of technology to measure what matters and use assessment data for continuous improvement.</i>	<b>Goal 2: Assessment</b> <i>At all levels, our education system will leverage the power of technology to measure what matters and use assessment data for continuous improvement.</i>
<b><i>What will your district do over the life of this local Educational Tech Plan to ensure that technology is used for assessment?</i></b>	

**Goal:** Greenwich Public Schools is committed to leveraging the power of technology to measure what matters and use assessment data for continuous improvement.

**Action Plan for Goal Area 2****Transition to the Common Core Standards (CCS) & the Smarter Balanced Assessment Consortium (SBAC)-**

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
<b>Research Technology Needs</b>			
Research the technology (hardware/software) requirements necessary to take the SBAC Summative and Interim Assessment	Director Ed Tech	Summer, 2012	Results of "Needs Assessment"
Research additional IT requirements: -Bandwidth -Staffing -Infrastructure -WiFi  Research potential leasing options for additional technology	Director Ed Tech	Budgeted in 2012-13 for purchase July, 2013-14	Proposed Budget 2013-14
Create a building wireless accessibility plan (per building/funding)	Director Ed Tech Dir Facilities	GHS: 2011-12 Middle Schools: 2012-13 Elementary: 2013-14	Capital Plan
<b>Develop Comprehensive Transition Plan</b>			

Develop Testing Scheduling Plan -4-6 week testing window -Time period and testing locations (classrooms/labs)	Deputy Superintendent, Asst. Supt. CIPL, Building Principals	Spring 2012-2013	Transition Plan
Research Additional hardware/software (leasing option) Research Staffing Needs (tech integration & systems support)	Director Ed Tech Dir Finance, Media/Tech Coord.	Fall 2013-14	Transition Plan
Pilot sample SBAC Assessments	Curriculum Coordinators	Spring 2013-14	Monitoring Reports/ Department Meeting Minutes
Review availability to export data to Data Dashboard (Summative and Interim assessments) and Data mining (reporting options & queries)	Techneeq	Spring 2013-14	eLearning Studio Reports
Review current benchmark assessments and SBAC Assessments to align the district's Comprehensive Assessment System and Calendars	Special Projects Manager, Asst. Supt. CIPL and Curriculum Coordinators	Spring 2013-14	GPS Comprehensive Assessment System and Calendar
<b>Professional Learning</b>			
Survey professional learning needs on a yearly basis; adjust as needed	Asst. Super. CIPL	Spring of 2013, 2014, 2015	Survey Results
Provide systematic professional learning-teachers & administrators (reference Goal 3, GPS PD Institute):	Asst. Super. CIPL	On-going 2013-15	EZ Traxx
-SBAC interim and summative assessments (performance tasks and computer adaptive)  -Media Literacy skills (e.g. reading online, keyboarding, word processing, source evaluation)	Coordinator Lang Arts Coordinator Math Coordinator Media/Tech Coordinator Science		
<b>Communication Plan</b>			
Generate on-going communication to all stakeholders on the status and financial impact due to the results of	Communications Dir	Spring 2013	Communication Plan

the “needs assessment”, the Transition Plan and professional learning opportunities

- District Leadership
- Board of Education
- Community

### Data Driven Decision-Making to Focus Improvement at all levels

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
<b>Tier I/ Core Benchmark &amp; Formative Assessment</b>			
Benchmark Assessments: As content-area assessments are made available, the technology team will work with staff to make assessments and assessment results available in eLearning Studio/RTI Studio	Asst. Supt. CIPL Curriculum Coordinators/ Program Admins. and Director Ed Tech	2011-2012: RTI Studio: 100% of <i>available assessments</i>	Measurement tools provided within RTI Studio  Results displayed in rti studio  Monitoring reports
Make adjustments to current GPS Comprehensive Assessment System and Calendars to accommodate additional SBAC formative and interim assessments	Special Projects Manager, Asst. Supt. CIPL, Curriculum Coordinators/ Program Admins.	2013-15	GPS Comprehensive Assessment System and Calendar
<b>Tiers II/III Progress Monitoring Tools/Probes</b>			
Intervention plans for reading, writing and math (with targets) will be uploaded into Rtl Studio to support the SAT process; teachers will utilize the progress-monitoring feature to track/target student learning	Director of Ed Tech, Curriculum Coordinators, Building Admin./staff	Winter 2013-14	Rtl Studio Intervention Plan system
As the district builds capacity for Rtl and tiers of instruction, refinements will be made to intervention plans and progress-monitoring systems	Director of Ed Tech, Curriculum Coordinators, Building Admin./staff	On-going	Rtl Studio Intervention Plan system

Summer School 2012			
Summer School invitations will be calculated by use of the Summer School Calculation tool to include Language Arts and Mathematics assessment data as defined by District Coordinators	Coordinators Lang Arts and Math Director Ed Tech	2012-2013 make adjustments to calculator to better identify students that might benefit from Summer School.	Summer School invitations will be created within RTI Studio. Individual school adjustments should be less than 25%
Staffing Models			
Create tools for staffing models (specials) based on student outcomes, interventions and progress monitoring	Coordinators Lang Arts, ELL, Math Director Ed Tech	2011-2012 Lang Arts model finalized Rollout model to other areas based on Lang Arts model: 2013-2014	Calculator available online through RTI Studio



**Goal 3: Connected Teaching and Learning**

National Educational Tech Plan	State Educational Tech Plan
<b>3.0 Teaching: Prepare and Connect</b> <i>Professional educators will be supported individually, and in teams, by technology that connects them to data, content, resources, expertise and learning experiences that enable and inspire more effective teaching for all learners.</i>	<b>Goal 3: Connected Teaching and Learning</b> <i>Professional educators will be supported individually, and in teams, by technology that connects them to data, content, resources, expertise and learning experiences that can empower and inspire them to provide more effective teaching for all learners.</i>
<b>What will your district do over the life of this local Educational Tech Plan to ensure that educators are prepared to teach 21st Century learners and are connected to technology resources that support teaching and learning?</b>	

**Goal:** Professional educators will be supported individually, and in teams, by technology that connects them to data, content, resources, expertise and learning experiences that can empower and inspire them to provide more effective teaching for all learners.

**Action Plan for Goal 3****Professional Learning Curriculum**

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
Develop a comprehensive professional learning <b>curriculum</b> for teachers, administrators and non-certified staff to promote the purposeful and effective use of technology within the educational settings.			
Evaluate National, State, and Local Standards for Technology and Curriculum to determine necessary Professional Learning Components.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 12/2012	Alignment Document  Staff Surveys
Outline core curriculum and district based standards for teachers, administrators and non-certified staff to ensure that all are able to fully participate in the 21st century educational environment.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 12/2012	Alignment Document  Staff Surveys

Ensure the inclusion of modules to address goals in the DSIP including CCSS Assessments, Mobile Learning, Effective Use of Data for Decision Making.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 12/2012	Alignment Document  Staff Surveys
Ensure alignment of professional learning curriculum with TEPL Indicators.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 12/2012	Alignment Document  Staff Surveys

## **GPS Professional Learning Institute of Technology**

What steps will you take?	Who will be responsible?	When (be specific)?	How will you measure?
Design and implement the <b>GPS Professional Learning Institute of Technology</b> , through which teachers, administrators and non-certified staff will be able to pursue certificates of expertise on use of technology within the educational setting.			
Using newly developed curriculum, design core course and elective course offerings.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 3/2013	Alignment Document
Ensure the inclusion of courses to address goals in the DSIP including CCSS Assessments, Mobile Learning, Effective Use of Data for Decision Making.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 3/2013	Alignment Document
Ensure inclusion of strategies for meaningful and purposeful application to use in the educational setting.	PD Subcommittee Coordinator Media/Tech Assistant	by 3/2013	Course descriptions  Course materials

	Superintendent (CIPL) Media Specialists (one from each level)		
Provide for multiple avenues for learning (one-on-one, PLA courses, online tutorials, e-learning, etc.)	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 3/2013	Course Catalog
Ensure that courses are continuously offered on district-wide technology systems (Rtl Studio, Aspen, Portal, Google Docs, Wikispaces, etc.)	PD Subcommittee Coordinator Media/Tech Director Ed Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 3/2013	Professional Learning Calendar

### Assessments for staff

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
Develop meaningful <b>assessments</b> for staff to determine technology proficiency level of teachers, administrators, and non-certified staff in order to provide differentiation in professional learning, as well as to evaluate effectiveness of professional learning experiences.			
Explore the possibility of using commercially developed online assessments to determine baseline proficiency (ex. Learning.com, etc.).	Tech Plan Committee  PD Subcommittee	by 3/2012  by 6/2012	Staff Survey
Assess administrators and a volunteer group of certified staff to determine baseline skill level.	PD Subcommittee	9/12 - 12/12	Online assessment
Assess all staff to determine baseline skill level for all teachers to establish professional learning goals.	PD Subcommittee; Coordinator Media/Tech Assistant Superintendent (CIPL)	5/13	Online Assessment
Create and implement a Basic Technology Integration Proficiency Assessment for all	PD Subcommittee Human Resources	Spring 2013	Online assessment

incoming new staff.			
Establish district-wide goal development guidelines to ensure that all teachers develop goals to improve technology skills.	PD Committee	(implement for teacher goals 9/13-6/14)	Professional Growth Plans School Improvement Plans Program Improvement Plans
Use TEPL to guide development of assessments to continually evaluate teachers' new learning and the application of strategies in classroom practice.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 9/2012	Alignment Document
Develop meaningful methods for staff to provide feedback on the effectiveness of professional learning courses and use this feedback to drive growth and change in the program.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 3/2013	Course evaluations
Provide teachers with opportunities to suggest, design, and facilitate future courses.	PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 3/2013	Course evaluation

## Management of Technology Professional Learning

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
Develop a vehicle for the oversight of the implementation, <b>management</b> , and continued development of the technology professional learning curriculum and GPS Professional Learning Technology Institute.			
Establish a subgroup of the District Professional Learning Committee to oversee Professional Learning in technology.	District Professional Learning Committee PD Subcommittee Coordinator Media / Tech	by 3/2012	List of new committee members
Redesign district calendar for professional learning to ensure consistency of learning in tech courses.	District Professional Learning Committee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	by 9/2012	Audit of professional learning offerings
Establish a procedure for continuous review of the curriculum and course offerings in the GPS Professional Learning Institute of Technology to ensure alignment with DSIP goals and TEPL indicators.	District Professional Learning Committee PD Subcommittee Coordinator Media/Tech Assistant Superintendent (CIPL) Media Specialists (one from each level)	Ongoing (starting 3/2013)	Course evaluations  Regularly scheduled committee meetings
Establish a technology "certificate" program, through which staff will receive not only CEUs for their work in Professional Development, but certificates of competency with various technologies.	PD Subcommittee Coordinator Media/Tech	by 9/2013	Certificate
Establish methods for remediation to ensure that staff who are not proficient with technology have the opportunity to learn the necessary skills.	PD Subcommittee Coordinator Media/Tech Media Specialists (one per level)	by 3/2013	Staff Survey Course Evaluations
Develop criteria to identify and recruit a pool of potential instructors for the GPS Professional Learning Institute of Technology.	PD Subcommittee Coordinator Media/Tech	by 12/2012	Instructor Application
Establish budgetary support for tech institute course teachers.	Coordinator Media/Tech	by 3/2013	Budget Document

	Assistant Superintendent (CIPL)		
Refine methods for teachers, administrators and non-certified staff to explore and pilot the use of new technologies.	PD Subcommittee Coordinator Media/Tech	Partially accomplished, refinement by 9/2013	Emerging Technology Applications
Develop a procedure for approval of out-of-district professional learning activities, including plans for sharing new knowledge upon return to the district.	PD Subcommittee Coordinator Media/Tech	by 3/2013	Application
Establish budgetary support for staff leaders in technology to attend outside workshops to bring new, cutting edge technology to GPS.	Coordinator Media/Tech Assistant Superintendent (CIPL)	by 9/2013	Budget Document
Develop and maintain a Wiki with all professional learning resources from the GPS Professional Learning Institute of Technology.	Tech Plan Committee Coordinator Media/Tech Media Specialists (one from each level) GPS Professional Learning Institute of Technology Instructors	by 6/2013	Wiki Course Materials
Provide a clearinghouse for information about current district, state, and federal policies and legislation surrounding acceptable use of technology (e-mail, cyberbullying, etc.)	Tech Plan Committee Coordinator Media/Tech Director Ed Tech Director Communications Media Specialists (one from each level)	by 6/2013	Manuals Documents PD Acknowledgement form for staff
Revise TEPL I & II to include 21st century skills in each indicator.	PD Subcommittee TEPL Committee	by 2015	Revised TEPL Documents

## Goal 4: Productivity and Efficiency

National Educational Tech Plan	State Educational Tech Plan
<b>Productivity: Redesign and Transform</b> <i>At all levels, our education system will redesign processes and structures to take advantage of the power of technology to improve learning outcomes while making more efficient use of time, money and staff.</i>	<b>Productivity and Efficiency</b> <i>At all levels, our education system will redesign processes and structures to take advantage of the power of technology to improve learning outcomes while making more efficient use of time, money and staff.</i>
<b>What will your district do over the life of this local Educational Tech Plan to maintain or redesign processes and structures to take advantage of the power of technology to improve learning outcomes while maintaining efficiency?</b>	

### Action Plan for Goal Area 4

**Goal:** Establish structures and processes for the productive and efficient management of technologies as both instructional and operational tools and resources.

#### Organizational Structures/Expectations

**Objective 1:** Establish/Plan for more productive and efficient use of the technology-based systems, tools, and resources that are currently employed by the GPS.

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
<b>Research / Needs Assessment</b>			
Complete Needs Assessment and Analysis of GPS Staff	Tech Plan Goal 5 Subcommittee	Administration: Jan./Feb. 2012 - Completed	Response Rate
<b>Assess Inventory and Establish Roles, Responsibilities, Expected Use</b>			
Conduct inventory of system technologies	Media Tech. Coordinator / Dir. Ed. Tech	By September 2012	Inventory is completed
Conduct inventory of hardware	Dir. Ed. Tech	By September 2012	Inventory is completed
Establish roles and responsibilities at the district level with regard to broad oversight of current and emerging technologies.	HR/Senior Administration	By September 2012	Position and Responsibility is Clarified – Job Descriptions are Completed
Clarify roles, responsibilities, and minimum proficiency expectations for technology use and support across the district, aligned to applicable	HR/ Media Tech. Coordinator / Dir. Ed. Tech	By September 2012	Technologies assessment

standards.			survey
Update Job Descriptions	HR	By Fall 2012	Job Descriptions completed
Complete/Distribute/Communicate GPS Technologies Resource Guide to include: a system's oversight, purpose/function, access to, expected use by, tech support resource, review cycle, etc.	Media Tech. Coordinator / Dir. Ed. Tech	By June 2013	Guide is completed, easily accessible  Survey
<b>Build School-Based Leadership Capacity</b>			
Provide guidelines for creating/improving upon the role of the school-based technology committees.	Media Tech. Coordinator	By June 2013	
Establish a "point" person at each school for stewarding the vision and mission of the Technology Plan	Media Tech. Coordinator	By June 2013	
<b>Update Policies / Procedures</b>			
Provide annual new technologies training and training for updates of current technologies for all roles within GPS. (See Professional Learning Goal)	Media Tech. Coordinator, IT/MIS, HR Director	See PL Goal	See PL Goal
Develop and communicate ongoing expectations for training, policies, procedures for current and new technologies. Refine/Update current policies included, but not limited to the following: - Revised AUP - Separate AUP for Staff - BYOD (new) - Criteria for Min. Guidelines for BYOD - Establish Min Expectations for Apps - System and Procedure for Purchasing Apps - Gift Policy - Communication Procedures/Expectations	Media Tech. Coordinator " " " " Dir. Of Communications	By December 2012	Procedures updated and disseminated
<b>Showcase Use of Technology</b>			
Promote exemplary use of new technologies through establishment of district "power user" group, * with membership representing each school in	Media Tech. Coordinator	BY December 2012	Established Group, regular meetings, minutes



the District * plan and recommend annual showcase opportunities for internal and external technology users.			shared, Showcase evaluation
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### Optimizing Functionality of Information, Communications and Technology Systems

**Objective 2: Optimize the functionality of current technologies for greater productivity and efficiency.**

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
<b>School-Home Communications</b>			
<b>WEB SITE:</b> Optimize the functionality and use of the district website, including: <ul style="list-style-type: none"> <li>* Review staffing needs in support of web content</li> <li>* Conduct review of current CMS vis a vis other available systems (current CMS contract ends June 2013)</li> <li>* Implement Improvements and/or new system</li> </ul>	Dir., Communications w/Dir. Ed Tech Coord. Media/Tech Webmasters Sub-Committee (+HR Director, Supt.)	Ongoing  By November 2012  By January 2013  By June 2013	Usage Tracking  Survey/s
<b>INTRANET PORTALS:</b> Optimize the functionality and use of the teacher, parent, and student portals, including, but not limited to the following considerations: <ul style="list-style-type: none"> <li>* Full implementation of Parent Portal</li> <li>* Updates to Teacher Portal to reflect new Parent Portal</li> <li>* Updates to Student Portal to reflect new Parent Portal</li> <li>* Secondary Gradebook</li> <li>* Elementary Report Card</li> </ul>	Dir. Educational Technology	2012-13 2012-13 2012-13	Usage Tracking  Surveys
<b>MASS eCOMMUNICATION SYSTEM:</b> Optimize the functionality and use of Parentlink	Dir. Communications Dir. Educational Technology		Usage Tracking  % of target group reached/data integrity

Learning and Information Systems			
Audit use and optimize functionality of the following systems, including but not limited to: <b>Learning Management Systems</b> * Review systems including google sites, wikispaces, etc.	Coord. Media/Tech.	2012-13	Usage tracking stats  Proficiency Assessment
<b>Naviance</b> * Implement Student Success System * Ongoing Review and Refinement	Dir. Guidance	2012-13 2013-15	Survey/s
<b>Curriculum Connector (Mapping)</b> * Access for all K-5 teachers to core maps, select 6-12 areas available * Review/Roll out to all teachers * Ongoing Review and Refinement	Coor. Media/Tech.	2012-13  2013-14 2014-15	
<b>eLearning Studio</b> (Data Dashboard, Rtl Studio, ELL Studio) • Ongoing Review and Refinement	Dir. Educational Tech.	2012-13  2013-14 2014-15	
<b>Destiny</b> – Library, Asset, Digital Resources *Include resources aligned to teacher standards for CCSS/Asset Manager – inventory system/eBook Management * Ongoing Review and Refinement	Coor. Media/Tech.	2012-13  2013-15	
<b>Google Apps</b> for Staff eMail, Calendaring, Collaborative Documents *Ongoing training, evaluate and implement use of Google sites * Ongoing Review and Refinement	Dir. Educational Tech.	2012-13  2013-15	
<b>EZTraxx</b> * Ongoing monitoring.	Asst. Supt. CIPL	2012-13	
<b>Student Information System</b> (Aspen) * Implement IEP Module * Ongoing Review and Refinement	Dir. Educational Tech.	2012-13 2013-15	
<b>HR/TEPL</b> – implement new system	Dir. Human Resources	2012-13	
Policies/Procedures			
Update and/or develop in alignment with expanded or enhanced use of current technologies	Media Tech. Coordinator / Dir. Ed. Tech/Dir. Of Comm.	Prior to official launch of enhanced system and/or new module implementation	

## Emerging Technologies

**Objective 3: Establish organizational structure for anticipating and exploring emerging technologies and establish/plan for the productive and efficient use of potential new technologies - systems, tools, and resources, etc.**

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
<b>Administrative Structure</b>			
Establish Technology Advisory Group that explores emerging technologies and their potential within the district. <ul style="list-style-type: none"> <li>* Specify Roles and responsibilities.</li> <li>* Address both internal and external stakeholder views</li> <li>* Establish and communicate structure, rationale for and roles and responsibilities of group.</li> </ul>	Media/Tech Coordinator, Dir. Ed. Tech.	By January 2012	Group is established, meets regularly, minutes filed with the District,
Develop and recommend plan for attending regional/national/international technology conferences in order to anticipate trends to include opportunity for professional learning and/or information sharing with GPS colleagues	Tech Advisory Group, led by Coord. Media/Tech	By November 2012	# of Conferences attended/# of people attending  documentation of PL or information sharing
Develop and recommend a standardized organizational system for establishing a district/school <b>pilot program</b> for emerging technologies.	Tech Advisory Group, led by Coord. Media/Tech	By Fall 2012	Pilot Evaluations
Develop and recommend a standardized organizational <b>system for adopting new</b> technologies and establishing expectations for use, to include: <ul style="list-style-type: none"> <li>* Evaluate staffing needs to meet technology objectives.</li> </ul>	Tech Advisory Group, led by Coord. Media/Tech	By Winter 2013	Based on survey results
Recommend, adopt and implement a mobile device management for new technologies.	Tech Advisory Group with IT/MIS	By September 2012	Inventory and statistics from system.
<b>Policies/Procedures</b>			
Develop (Refine) and recommend	Senior	By September	Pilot Evaluation

Procedure for piloting emerging technologies,	Administration	2012	
Develop relevant policies and/or procedures for new technologies	Advisory Group (Initiates)  Media/Tech Coordinator, Dir. Ed. Tech. (finalizes)	Prior to implementation	Annual review of policies pertaining to technologies

## COMMUNICATION OF 2012-15 TECHNOLOGY PLAN

### Objective 4: Communicate Tech Plan

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
Communicate technology plan to all stakeholders. Senior Administration District and School Administration Board of Education PTA/Parents Town Officials Community (Reference Tech Plan Communications Plan)	Tech. Advisory Committee Media Tech Coord. Director, Communications Dir., Ed. Tech	By 6/2012  2012-15 Ongoing updates	Survey/s Usage Tracking

**Goal 5: Infrastructure for Teaching and Learning**

National Educational Tech Plan	State Educational Tech Plan
<b>Infrastructure: Access and Enable</b> <i>All students and educators will have access to a comprehensive infrastructure for learning, when and where they need it.</i>	<b>Infrastructure for Teaching and Learning</b> <i>All students and educators will have access to a comprehensive infrastructure for learning, when and where they need it.</i>
<b>What will your district do over the life of this local Educational Tech Plan to ensure that all students and educators will have access to a comprehensive infrastructure for teaching and learning?</b>	

**Goal:** All students and educators will have access to a comprehensive infrastructure for learning when and where it is needed.

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
<b>Objective 1: Build, Reliable Robust Wireless Capacity throughout our school buildings</b>			
<b>Complete installation of wireless access throughout our school buildings (through Capital Improvement Plan)</b>  --GHS – complete installation --Middle Schools --Elementary Schools	Director Facilities Director Ed Tech	By August, 2012 By August, 2013 By August, 2014	Approved Capital Budget
Continually evaluate and review Wi-Fi, bandwidth capacity and speed of connectivity to support addition of laptops and mobile devices.	Director Facilities Director Ed Tech	Ongoing	Support of additional inventory of laptops/mobiles
Update Filtering Device – Evaluate the use of filters to provide more access to critical web tools.	Director Ed Tech	June, 2012	Upgrade Installed
<b>Upgrade Copper/Optical Backbone Switches</b> CC, ISD, OG, RV, NM	Director Ed Tech Director Facilities	August, 2013	Approved Capital Budget
GHS		August, 2014	Approved Capital Budget
NL		August, 2015	Approved Capital Budget
<b>Upgrade Desktop Switches</b>	Director Ed Tech Director Facilities		Approved Capital Budget
Hav, WMS, CMS, EMS		August, 2013	Approved Capital Budget

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
CC, ISD		August, 2015	Approved Capital Budget
<b>Upgrade Telecommunications</b>	Director Facilities Director Ed Tech	August, 2013	Approved Capital Budget
<b>Upgrade Cabling</b>	Director Facilities		
NL, CMS		August, 2015	Approved Capital Budget
CC		August, 2016	Approved Capital Budget
ISD		August, 2017	Approved Capital Budget
<b>Objective 2: Manage Ongoing Technology Costs</b>			
<b>Leasing Model</b> Continue leasing model for desktop/laptops replacement and other technology with a 3 to 4-year cycle as required	Director Ed Tech Managing Director Operations	Continuation of current model	Yearly budget report
<b>School-Based Technology Review:</b> Review technology needs with building principals, media staff, coordinators – provide guidelines for and encourage school-based technology committees to support an ongoing review.	Coordinator Media/Tech	Continuation of current model: Interviews, coordinator meetings, TEPL, surveys	Maintain or improve student ratio Harris Survey results Staff survey results
<b>Monitor SchoolDude™</b> maintenance reports	Director Ed Tech	At least quarterly at staff meetings	Meeting minutes
<b>Objective 3: Support mobile learning – Develop a thoughtful plan for moving toward 1:1 Mobile Computing</b>			
Develop a funding plan	Coordinator Media/Tech Dir. Ed Tech	By Nov 2012	Budget Plan for 2013-14
Research types of devices and make recommendations based on evidence from pilots, literature and costs.	Coord. Media/Tech Dir. Ed Tech Emerging TechComm.	By Nov 2012	Budget Plan for 2013-14
Determine mobile device management (MDM) system	Coord Media/Tech Dir Ed Tech	By Nov 2012	Budget Plan for 2013-14

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
Develop protocol for inventory, management, filtering controls and app purchasing and deployment	Coord Media/Tech Dir Ed Tech	By July 2012	Written guidelines for protocol
Research/evaluate management considerations regarding BYOD plans (see Goal 1 for more details)	Coord Media/Tech Dir Ed Tech	Ongoing	Mobile Learning Plan
Develop guidelines for support/care and maintenance of mobile devices.	Dir Ed Tech	By July 2012	Mobile Learning Plan
<b>Objective 4: Staffing – Build capacity for IT and technology integration support through appropriate staffing</b>			
<b>Technical</b> Review staffing needs as Wi-Fi, need for greater integration, mobile computing and the SBAC is implemented. Include the following in review: <ul style="list-style-type: none"> <li>Recommendations by Consulting Group (Blum Shapiro) as the complete their analysis.</li> <li>Update and review current job descriptions.</li> <li>Establish support structure to build capacity of current IT staff.</li> </ul>	Director Ed Tech and Coordinator Media/Tech	Ongoing meetings with HR, review of maintenance reports, etc. as budgets are prepared. Each March personnel needs are reviewed for the following budget year.	Staffing budget
Review and recommend, as needed, expansion of K-8 MTA work schedule, to include days in summer for preparing desktops/laptops/devices for start of school.	Coordinator Media/Tech	2012-2013 Budget Year- Review needs by May 30, 2012	Budget approval
Add Microsoft Certified Engineer to high school technical staff (recommended through attrition)	Director Ed Tech and Assistant Headmaster	Review high school network administration by June 2012. Add MSCE by 2014 or earlier through attrition	2012-2013 Staffing budget
Increase District technical support staff – Help Desk / School-based training on systems (review	Director Ed Tech	Review needs	2014-2015 Staffing budget

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
<b>Certified Staff</b> <b>Review current staffing model dedicated to supporting teachers on integrating technology.</b> <ul style="list-style-type: none"> <li>Conduct comparative district survey to review types of positions employed to support teacher training for technology.</li> <li>Add a K-8 and 9-12 Technology Integrator (see appendix for job description)</li> </ul>	Coordinator Media/Tech	Review needs as Assessment Plan is rolled out	2013-2014 2014-15 Staffing budget
<b>Objective 5: Smarter Balanced Assessment – Support implementation of SBAC</b>			
<b>Create Implementation Plan -</b> Develop a funding plan to include leasing costs for replacement of desktops / begin replacing fewer desktops and replacing with laptops for SBAC /student projects.	Director Ed Tech Managing Director of Operations Coordinator Media/Tech	By Nov 2013	Budget Plan
<b>Evaluate technical specifications</b> required for the SBAC (Smarter Balanced Assessment Consortium)	Dir. Ed Tech Media/Tech Coord		Specifications for SBAC
<b>Establish a purchasing plan</b> and purchasing rationale	Dir. Ed Tech	By Nov 2014	Funding Plan
<b>Establish pricing model</b> for laptop labs	Dir Ed Tech	By Nov 2013	Budget Plan
<b>Participate in testing</b> sampling	Spec Proj. Mgr Dir Ed Tech	Spring 2014	Testing participation
<b>Purchase laptops/desktops</b> to provide sufficient useable computers to administer the SBAC within an agreed upon testing window	Dir Ed. Tech	July 2013 July 2014	Inventory
<b>Objective 6: Educator Technology – Improve capacities and efficiencies of administrative systems for educators</b>			
Email/Google Apps	Coordinator Media/Tech Director Ed Tech	All teachers (FT/PT) are provided Google Apps for Education Account	Usage statistics
Complete Smartboard Plan – monitor usage, training, support.	Coordinator Media/Tech	See goal 1 for details.	Survey results



What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
Monitor Online Attendance	Principal	All teachers	SIS
Monitor and implement Online Progress Grading	Principal	All Secondary Schools	SIS
Monitor and implement Online Marking Period Grading	Principal	All teachers	SIS
Monitor the usage of Teacher Web Pages, wikis, blogs and other methods of communicating homework/classroom projects and activities.	Coordinator Media/Tech Dir. Communications	All secondary teachers	Utilization statistics
Provide technology for staff in district to borrow if necessary	Coordinator Media Tech	Technology is available for teachers to take home including hardware and software	Documented by completion of "Staff Request to Borrow Equipment ..." form
<b>Objective 6: Administrative Technology – Improve capacities and efficiencies of administrative systems for educators</b>			
Monitor and support Data Dashboard	Director Ed Tech	Benchmark Assessments, ISIP, Progress Monitoring CMT DRP CAPT SAT/PSAT – September, 2013	Utilization statistics
Monitor and support Email/Google Apps	Coordinator Media Tech Director Ed Tech	All administrators are provided Google Apps for Education Account	Usage statistics
Monitor, support and implement the Student Information System including Special Education Module	Director Ed Tech	All administrators are provided with a login to the SIS and given roles and responsibilities as required to view and/or	Aspen Logs

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
		edit information as necessary	
Monitor and support Computer Access	Director Ed Tech	All administrators are provided access to technology	Inventory
Monitor and support School/Department Web Pages	Dir. Communications Coordinator Media Tech	All Schools and departments	District Web Site
Provide technology for administrators to borrow if necessary	Coordinator Media/Tech	Technology is available for administrators to take home including hardware and software	Documented by completion of "Staff Request to Borrow Equipment ..." Form
<b>Objective 6: Stakeholder Technology – Improve capacities and efficiencies of administrative systems for educators</b>			
Monitor and support: Online, interactive school budget	Director Ed Tech	Current budget information is provided online for interested stakeholders. Budget may be downloaded (Excel) or analyzed online. 2012-2013 Budget	Usage statistics
Monitor and support: Online School Finder Database	Director Ed Tech	Updated searchable database that locates approved elementary, middle and high school by address	School Finder database is available and updated
Monitor and support: Online (searchable)	Director Ed Tech	Up-to-date	Searchable

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
Policies and Procedures Database		District Policies and Procedures as well as Monitoring reports are available in a searchable database	policies and procedures database is available and updated within 1 working day
Parent Portal : Implement additional modules for improved communication with parents, monitor and support.	Director Ed Tech	<b>March 2012:</b> Demographic Data (all) Attendance (secondary) Marking Period Grades (secondary) Progress Grades (high school, WMS) Final Semester/Qtr grades (secondary) Homework (secondary) Lang Arts  <b>September 2012:</b> Progress Grades (GHS, CMS, WMS)  <b>January 2013:</b> Second Parent login Standardized Assessment Scores  <b>January 2014:</b> ISIP, Progress Monitoring	Utilization reports

What Steps Will You Take?	Who Will Be Responsible?	When (be specific, e.g., by 10/1/13)?	How will you measure?
		Information	
Monitor and support: Emergency contact Information	Director Ed Tech	<b>ParentLink</b> The district provides a notification system (phone/email) to all schools and/or programs that will allow for emergency as well as routine notification to parents as required	Usage reports
Monitor and support: Daily Attendance Calls (GHS)	Systems Analyst GHS	Automated nightly phone calls are made to each family notifying parents of student absences Automated letters are sent for notification of excessive absences	Contact report
Monitor and support: Online, Anonymous Bullying Reporting option	Director PPS Director Ed Tech	Review current vendor solutions 2012-2013	Online solution available

## Appendices

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## Children's Internet Protection Act (CIPA) Certification

Schools and libraries that plan on receiving E-Rate discounts on Internet access and/or internal connection services after July 1, 2002, must be in compliance with the CIPA. CIPA compliance means that schools and libraries are filtering their Internet services and have implemented formal Internet safety policies (also frequently known as Acceptable Use Policies). Information on the CIPA requirements is located at [http://E-Ratecentral.com/CIPA/cipa\\_policy\\_primer.pdf](http://E-Ratecentral.com/CIPA/cipa_policy_primer.pdf).

I, \_\_\_\_\_, certify that one of the following conditions (as indicated below) exists in  
Name of Superintendent/Director

Greenwich Public Schools

LEA

- ☒ My LEA/agency is E-Rate compliant; or  
☐ My LEA/agency is not E-Rate compliant. (Check one additional box below):

<input type="checkbox"/>	Every "applicable school*" has complied with the CIPA requirements in subpart 4 of Part D of Title II of the ESEA**.
<input type="checkbox"/>	Not all "applicable schools*" have yet complied with the requirements in subpart 4 of Part D of Title II of the ESEA**. However, the LEA has received a one-year waiver from the U.S. Secretary of Education under section 2441(b)(2)(C) of the ESEA for those applicable schools not yet in compliance.
<input type="checkbox"/>	The CIPA requirements in the ESEA do not apply because no funds made available under the program are being used to purchase computers to access the Internet, or to pay for direct costs associated with accessing the Internet, for elementary and secondary schools that do not receive E-Rate services under the Communications Act of 1934, as amended.

\*An applicable school is an elementary or secondary school that does *not* receive E-Rate discounts and for which Ed Tech funds are used to purchase computers used to access the Internet, or to pay the direct costs associated with accessing the Internet.

\*\* Codified at 20 U.S.C. § 6777. See also <http://www.ed.gov/legislation/ESEA02/pg37.html>

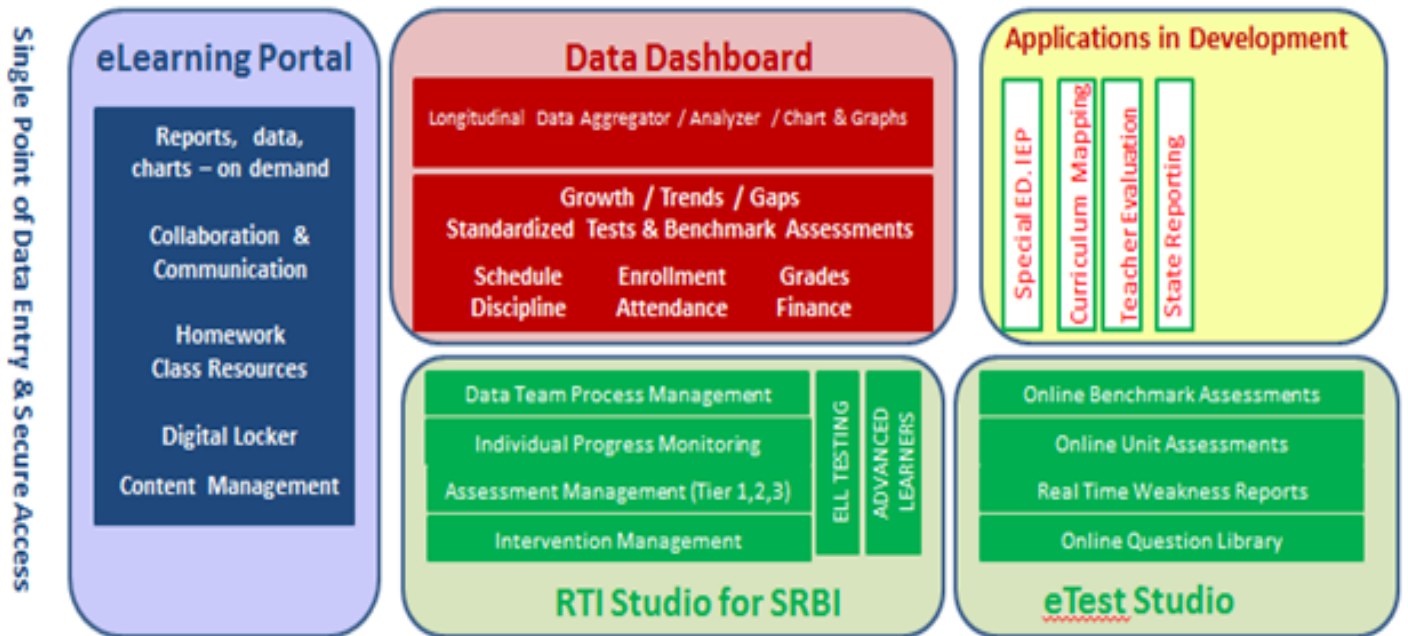
\_\_\_\_\_  
Signature of Superintendent/Director

\_\_\_\_\_  
Date



**Appendix**  
**eLearning Studio- One Platform for SRBI & Learning Management**

**ONE PLATFORM FOR SRBI & LEARNING MANAGEMENT**



**Differences between eLearning Portal, Data Dashboard, RTI Studio and eTest Studio:**

**I. eLearning Portal:**

- Manages permissions and access to multiple district applications
- Encrypts all data to maximize security and integrity of data

**II. Data Dashboard**

- Administrative (central office and building administrators) tool for: Collection and organization of data from multiple data sources
  - Individualized dashboards created as required (i.e. Board of Ed Dashboard, Principal Dashboard, etc.)
  - Ability to query, view trends and/or gaps
  - Ability to display data with graphs and charts
  - Interactive displays that allow for drill down (i.e. to teacher or student level as necessary)

**III. RTI Studio**

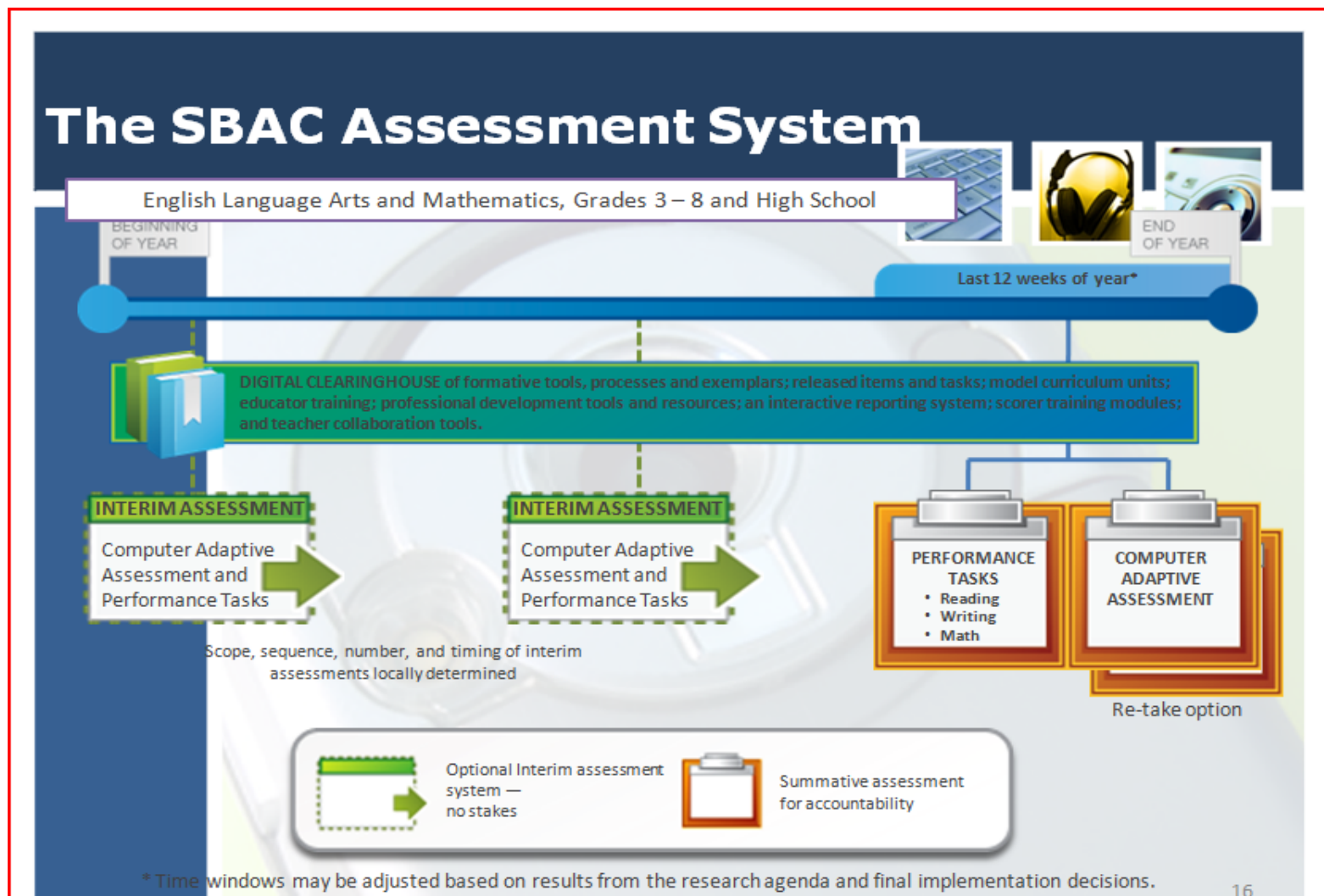
- Optimized for teachers SRBI and Data Entry for Formative Assessments
  - Data Team collaboration and trigger interventions based on student performance
- Intervention Manager
  - Manage multiple and simultaneously occurring student interventions
  - Allow for multiple areas of focus
  - Track and display Performance Monitoring

**IV. eTest Studio**

- Create and Administer Assessments for students online



**Appendix:  
The SBAC Assessment System**





## GREENWICH PUBLIC SCHOOLS: MEDIA AND TECHNOLOGY CURRICULUM

The skills and processes of the Library Media and Technology Program are referred to as *Transdisciplinary Strands*, which are organizing concepts representing skills, core knowledge and processes and are interwoven throughout all content areas. The concept of Transdisciplinary Strands provides an illustration of how Technology must be taught. The processes and skills that comprise each of the Transdisciplinary Strands are life-long and not dependent on any one content area. In fact, they provide critical skills for students to adapt to the one inevitable aspect of their future – change. The five *Transdisciplinary Strands* and their corresponding Standard and Components are *Research and Information Fluency*, *Communication and Innovation*, *Technology Operations and Concepts*, *Digital Citizenship*, and *Literature Appreciation for Independent Learning* as follows:

### 1. Transdisciplinary Strand 1: Research and Information Fluency:

- **Standard 1: Students locate, access, evaluate, synthesize and use information effectively and efficiently to conduct research, solve problems and manage projects throughout all content areas.**
  - Plan strategies to guide inquiry.
  - Locate, organize, analyze, evaluate, synthesize and ethically use information from a variety of sources and media.
  - Evaluate and select information sources and digital tools based on the appropriateness to specific tasks.

### 2. Transdisciplinary Strand 2: Communication and Innovation

- **Standard 2: Students interpret, evaluate, communicate, and work collaboratively to create innovative products using digital and visual media.**
  - Apply existing knowledge to generate new ideas, products or processes.
  - Create original works as a means of personal or group expression.
  - Identify trends and forecast possibilities.
  - Interact, collaborate, and publish with peers, experts or other employing a variety of digital environments and media.
  - Communicate information and ideas effectively to multiple audiences using a variety of media and forums.
  - Contribute to project teams to produce original works or solve problems.
  - Develop cultural understandings and global awareness with learners of other cultures.

### 3. Transdisciplinary Strand 3: Technology Operations and Concepts

- **Standard 3: Students demonstrate a sound understanding of technology concepts, systems and operations and use computers and other technologies for productivity, problem solving, and learning across all content areas.**
  - Understand and use technology systems.
  - Troubleshoot systems and applications.
  - Select and use applications effectively and productively.
  - Transfer current knowledge to learning of new technologies.

### 4. Transdisciplinary Strand 4: Digital Citizenship

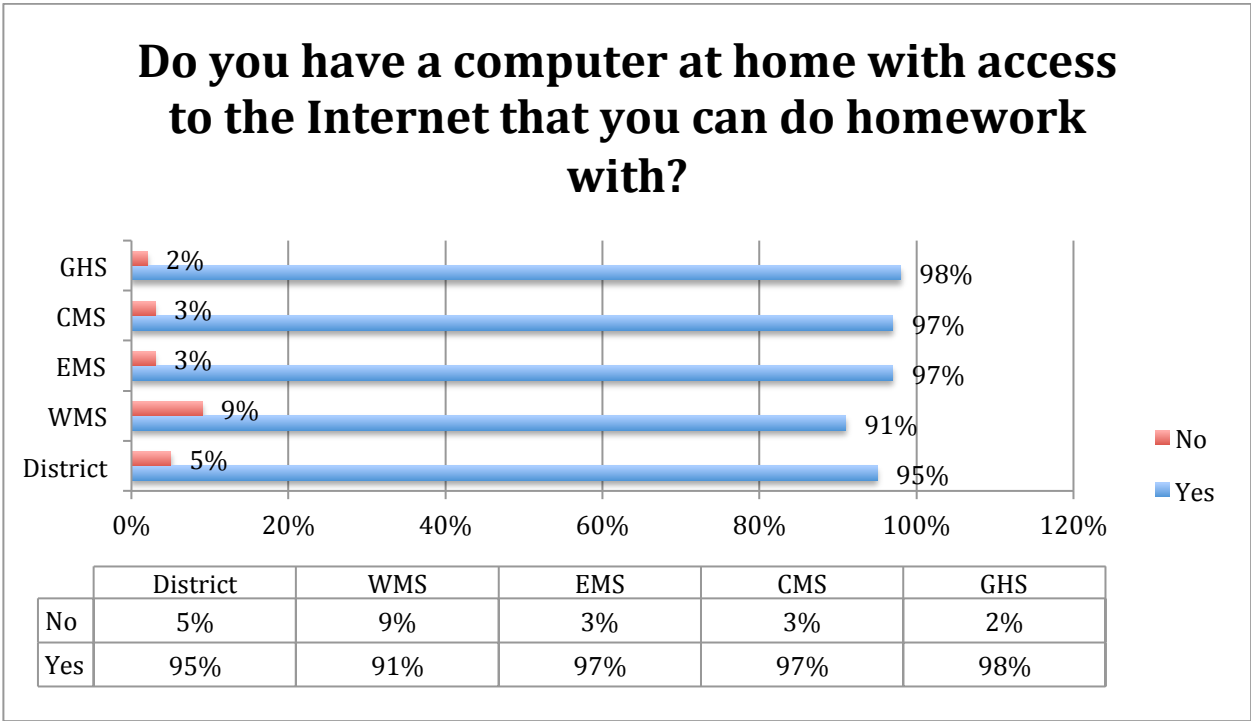
- **Standard 4: Students practice responsible, legal, safe and ethical use of information resources and technology.**
  - Advocate and practice safe, legal, and responsible use of information and technology.
  - Exhibit a positive attitude toward using technology that supports collaboration, learning and productivity.

### 5. Transdisciplinary Strand 5: Literature Appreciation for Independent Learning

- **Standard 5: Students read widely and use a variety of digital media resources for personal growth, independent learning and enjoyment.**

Appendix

Technology Survey Results – 5th, 8th and 10th Grade (as of 6/2011)



**Instructional Technology Integration Specialist**

**Title:** Instructional Technology Integration Specialist

**Primary Role:**

To serve as a district-wide technology leader with the goal of increasing the technological competency and proficiency of the Greenwich Public Schools faculty and staff and to oversee the ongoing Information Technology educational program to promote student learning.

**Qualifications:**

- Connecticut teaching certification and demonstrated success as a classroom teacher with knowledge and mastery of a variety of effective instructional strategies
- Possesses an endorsement as Media Specialist or holds a higher degree in Educational or Instructional Technology, or willingness to obtain degree or endorsement within two years.
- Demonstrates knowledge of the Connecticut State Standards, Common Core Standards, district and/or national technology standards for students and teachers (ISTE), elementary and middle school curriculum, and instructional and curriculum frameworks.
- Demonstrates ability to use of a variety of technologies and applications through coursework, workshop participation, and completed projects and products.
- Supports learning and integrates technology into the curriculum
- Identifies and evaluate software and make recommendations for its use in alignment with State Standards, Grade Level Expectations and Greenwich Public Schools curriculum.
- Demonstrates knowledge and understanding of adult learners, and is able to facilitate adult learning in a variety of instructional settings
- Demonstrates capacity to be self-directed, organized, and collaborative.

**Program Responsibilities:**

8. Participate on the Greenwich Public Schools Technology Advisory Committee
9. Support District Media & Technology Coordinator and Educational Technology Director in the operation and use of any site-based technology in order to assure curriculum and instructional alignment and effective use of technology resources at the school site
10. Collaborate with administrators to observe use of technology applications within classrooms and provide feedback regarding impact of professional learning offerings on student learning, level of student application, and current professional learning needs

**Professional Learning Responsibilities:**

11. Support teachers in the integration and use of technology in all curricular areas, including modeling and co-teaching.
12. Plan district professional learning and coordination of resources with others within the district.
13. Participate in the development and implementation of the Greenwich Technology Institute by creating curriculum, modules and online learning programs in conjunction with the District Media & Technology Coordinator.
14. Communicate with the school staff and community about training, equipment, software, curriculum materials, instructional video, and other technology resources
15. Provide train-the-trainer professional learning sessions for Media Specialists, Media Technical Assistants and Learning Facilitators.
16. Conduct systems training for certified and non-certified staff including, but not limited to, Google Apps for Educators, Web 2.0 tools, RTI Studio, Teacher Portal.
17. Coordinate professional learning activities directly related to the integrated use of technology in all content areas, including student demonstration projects, classroom demonstrations, team teaching, and workshops.
18. Work on a flexible schedule to allow for before and/or after school training sessions.

**EMERGING TECHNOLOGY PROJECTS (AS OF 3/1/2012):**

iPad (Science)	Program Admin	GHS Project 2011-2012 (See Emerging Technology Project Proposals)	Improvement in CAPT Science Scores
iPad (Music)	Program Admin	GHS Project 2011-2012	Teacher Grade book
iPad (SPED – CMS)	Principal	CMS project 2011-2012 (See Emerging Technology Project Proposals)	Time on task/engagement will engage students in learning.
Nook (6th grade CMS)	Principal	CMS project 2011-2012 (See Emerging Technology Project Proposals)	Collect data on time spent reading, comprehension, vocabulary, and understanding of the elements of literature
iPad (SPED – ISD)	Media Specialist	ISD project 2011-2012 (See Emerging Technology Project Proposals)	Assess and rate the apps tested for practicality, functionality, ease of use, and appeal to students
Wireless Laptops (GLV – K-5)	Media Specialist	GLV project 2011-2012 (See Emerging Technology Project Proposals)	Standardized test scores will improve in writing in the second year
iPod Nano (RV – ESOL)	Teacher, ESOL	RV project 2011-2012 (See Emerging Technology Project Proposals)	Pre and post assessments for listening comprehension
iPod Nano (RV – FLES Spanish)	Teacher, FLES	RV project 2011-2012 (See Emerging Technology Project Proposals)	UbD assessments should improve in reading comprehension, oral language and written language
Nook (OG – K-5)	Media Specialist	OG project 2011-2012 (See Emerging Technology Project Proposals)	Teachers will observe reading groups and recording reading comprehension and enjoyment
iPad (CC – SPED)	Media Specialist	CC project 2011-2012 (See Emerging Technology Project Proposals)	Usage and assessment of language development, behavior management and independence as measured by behavior plans, work completion plans and language output
iPad (GLV – Administration)	Principal	GLV project 2011-2012 (See Emerging Technology Project Proposals)	Review by Principal and Assistant Principal
iPad - iTouch (RV – Gr 4-5)	Teacher, 4th Gr	RV project 2011-2012 (See Emerging Technology Project Proposals)	Increase accessibility to a wider range of students

**Classroom Technology Survey Results:**



When asked about technology use with student-driven projects in our survey– as illustrated in Common Core State Standards – a majority of teachers responded that they provided opportunities for students to engage in these types of projects infrequently (Never / Once a Semester or Once a Month) as follows:

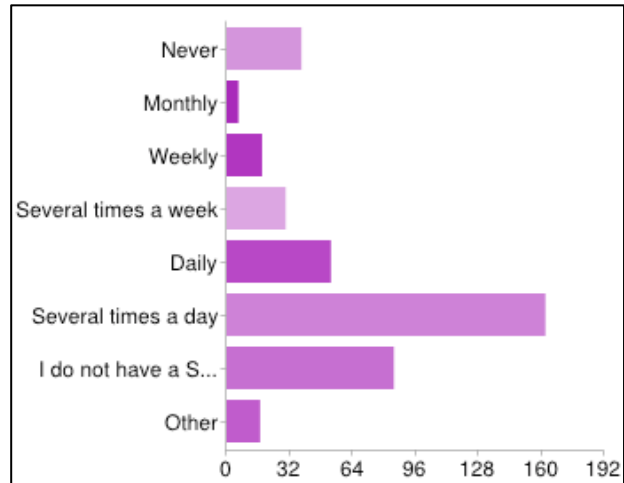
Student-Driven Project	Never or Once a Semester	Once a Month	CCSS Alignment
Use technology tools & resources to collaborate on digital projects	58%	16%	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others
Use technology to conduct research	55%	18%	Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
Use technology to communicate or express an idea	50%	16%	Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others
Use technology to make a decision or problem-solve	56%	15%	Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.
Use technology to administer an online assessment	63%	17%	SBAC

Comfort level using the following productivity technologies:

	Not comfortable/Need a lot of assistance	Need little assistance	Independent user/Expert
Word Processing (MS Word)	2%	2%	96%
Slideshow (Powerpoint)	7%	25%	68%
Spreadsheets (Excel)	17%	31%	51%
Podcasting (Voicethread, Photostory, etc)	56%	24%	5%
Web 2.0 multimedia (Prezi, Animoto, etc)	62%	18%	20%
Video Editing (iMovie, Moviemaker)	62%	19%	19%
Web Publishing (Finalsite, Google Sites, Wikispaces)	47%	24%	30%
Blogging	52%	22%	26%
Smartboard Notebook Software	26%	21%	52%
Photo Editing Software	31%	26%	32%
GoogleDocs	27%	32%	42%
Google Forms	32%	36%	31%

Smartboard Use – How often do you use the Smartboard?

<b>Never</b>	<b>10%</b>
<b>Monthly</b>	<b>2%</b>
<b>Weekly</b>	<b>5%</b>
<b>Several Times a Week</b>	<b>8%</b>
<b>Every day</b>	<b>14%</b>
<b>Several times a day</b>	<b>42%</b>
<b>Do not have one</b>	<b>22%</b>



When describing their proficiency on a Smartboard, here is the breakdown:

<b>I have one, but do not use it</b>	<b>0%</b>
<b>Beginner - I use my SMART Board as a projection device</b>	<b>7%</b>
<b>Intermediate - I use the SMART Board tools (ex. pens, highlighter, eraser) with MS Office, PDF documents and web browsers</b>	<b>30%</b>
<b>Proficient - I create interactive lessons utilizing SMART Notebook Software, Smart Exchange and the lesson activity toolkit</b>	<b>29%</b>
<b>Advanced - I use advanced tools including screencasting, video and SMART Response Clickers</b>	<b>5%</b>

Here is the breakdown of what teachers find to be obstacles in their use of technology tools in the classroom:

<b>Obstacle</b>	<b>No Obstacle</b>	<b>Obstacle</b>
<b>Time to practice and implement the new technology tools I learn in PD.</b>	8%	91%
<b>Time to plan</b>	3%	95%
<b>Other priorities</b>	11%	88%
<b>Lack of PD opportunities</b>	26%	71%
<b>Lack of technical support</b>	43%	64%
<b>Lack of training/coaching support</b>	30%	67%

Top requests for professional learning training sessions on specific technologies:

1. Google Docs (45%)
2. Smartboard Software/Lessons (45%)
3. Multimedia/Video editing (41%)

## Preferred Delivery of Professional Learning:

Teachers preferred technology training that focused on using the skills within the context of their instructional practices:	Percentage
Creating technology-rich lessons and units of study	66%
Mobile Devices (How to use in the classroom )	54%
Use of technology effectively in the classroom including instructional strategies for integrating technology	50%

Preference for delivery of training:	
District/school half day workshops or a full day	59%
Series C - Three 1.5 hour workshops after school	41%
3-hour early release	58%
Instructional coach/small group instruction	51%
Online tutorials	18%
Attending workshops taught by third parties	10%
Outside of the school day	3%

## Educational Technology Plan Review Guide

*Name of District:*

*District Contact:*

*Email*

*Phone:*

	RESC	Final	
	Complete? Yes/No	Complete? Yes/No	additional information required/comments
Cover Page: Superintendent or Executive Director Signature			
Cover Page: Board of Education Date Submitted			
Cover Page: Board of Education Date Approved			
Educational Technology Plan Preparation Check-Off: Agent Signature			
Local Education Agency (LEA) Federal Grant Program Compliance Form: Superintendent or Executive Director Signature			
LEA Profile			
Technology Committee			
Vision Statement			
Needs Assessment			
Goal 1: Engaging and Empowering Learning Experiences			
Goal 2: Assessment			
Goal 3: Connected Teaching and Learning			
Goal 4: Infrastructure for Teaching and Learning			
Goal 5: Productivity and Efficiency			
CIPA Form: Superintendent/ Executive Director Signature			
Questions/Comments			
I have reviewed the plan for alignment and completeness and provided feedback to the district.			

(print) Name of RESC Reviewer

Signature of RESC Reviewer

Date

Please attach this sheet to your revised and completed tech plan (one hard copy and one CD and send this to:

Cathy Bradanini  
Connecticut LEA Educational Technology Plans  
LEARN  
44 Hatchetts Hill Road  
Old Lyme, CT 06371